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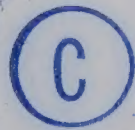
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AN ANALYSIS OF POLITICAL ATTITUDES OF
HIGH SCHOOL STUDENTS

by



LIONEL CHARLES BENOIT

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "An Analysis of Political Attitudes of High School Students," submitted by Lionel Charles Benoit in partial fulfilment of the requirements for the degree of Master of Education.

ABSTRACT

The aim of this study was to determine the relationship between certain selected variables and two political attitudes as they exist among high school students. The political attitudes were measures of "political efficacy" and "sense of citizen duty." In part, variables consisted of a number of demographic items such as sex, age, grade, father education, mother education, family income, school achievement, and participation in student government or other extracurricular activities. A number of other items which were measures of student attitudes and opinions were also used as variables.

To obtain an indication of attitudes toward the political process, scales were developed by the Guttman technique and also by the use of factor analysis scores. When these scales were compared, a high correlation resulted. When it became evident that the Guttman scale for both political efficacy and sense of citizen duty would produce consistent results, it was decided to use only Guttman scale scores.

The results of this investigation indicate that students will have a greater tendency to feel politically efficacious and have a sense of citizen responsibility if they are female, younger than the grade average, have well educated parents, enjoy an above average socio-economic

status, participate in extracurricular activities and hold an office in student government. Such students also concentrate on doing homework, watch fewer television programs and refrain from going out in the evenings except on weekends. These students find less fault with their schools, have loftier ambitions, and most aspire to attain a university education.

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CHAPTER I

THE DEVELOPMENT OF THE STUDY

I. INTRODUCTION

Teachers and administrators of Canadian schools must be increasingly aware of the changes necessary in secondary education to meet the needs of present day adolescents. The most effective way to explore the changing world of the adolescent citizen is through research and observation. This study, which attempts to analyze one narrow aspect of student attitudes and behaviour, may make a contribution to a better understanding of the adolescent in today's school.

The political attitudes of youth have long been of concern to the leaders of western societies, for it is this youth that determine the society's perpetuation or its decay. Two attitudes which were analyzed were "political efficacy" and "sense of citizen duty." "Political efficacy" means that a person, as an individual, feels he can act to improve the political system. The attitude of "sense of citizen duty" is the feeling of responsibility that a citizen has toward participation in political affairs. This study attempts to measure these attitudes and then to determine their relationship to the beliefs and values of adolescents.

II. THE PROBLEM

The purpose of this study was to determine some of the factors which are related to the political attitudes held by the high school students in a large Canadian metropolitan area.

III. SIGNIFICANCE OF THE PROBLEM

Our high schools have been designed to provide an adequate education program for all in the community. Administrators and teachers must endeavour to understand the values, beliefs, and attitudes of this teenage sub-culture if they wish to become more effective in the realization of the schools' educational objectives.

The adolescent society has been described as one which is separate and distinct from the larger society. Rather than expend energies in trying to defeat this sub-culture, to re-create it in the image of the larger society, it would be more effective if administrators of schools treated it as a cultural entity and studied it objectively. Once educators are in a position to understand and to describe this sub-society, and to have insight into its dynamics, they will be able to capitalize upon its strengths for a more effective educational program.

One set of attitudes which is important to the adolescent and to the whole society, is the political

attitudes which are held by these young people. School authorities have developed student governments within their school systems with the intention of guiding the development of these attitudes. However, few studies have been made to determine the extent of these political attitudes or to determine the forces affecting them. Once the forces affecting the political attitudes of teenagers are known, steps may be taken to modify them, in at least some instances. An awareness of these factors will enable one to cope more adequately with the problems facing the educators and the schools.

A complex set of forces is at work in the social and political environment of the student body. This empirical study, if brought to the attention of administrators, will make them sensitive to these, and this study, along with others of this nature, will assist in formulating theory which is so vital to good decision-making. A better understanding of the people among whom and for whom the school operates, reduces the possibility of unanticipated consequences in the decision-making process.

Students come from all social class levels of our society. The underprivileged student faces barriers to an education which are relatively unknown to the student who comes from a higher social class environment. The administrator who is aware of some of these differences can handle

the problems of the underprivileged in a more realistic and sympathetic manner.

Students who come from lower social class homes may find it difficult to integrate and to take advantage of all the educational opportunities which are offered in our predominantly middle class schools. Havighurst has pointed out that the American educational system is run by middle class people with middle class standards. Educational decisions and educational policies are made by people of the middle and upper classes who may be unaware of lower class values and attitudes (5, pp. 129-143). Lower class students will develop attitudes toward the school's social and political system which would assist them in becoming active and supportive citizens of their school. These feelings of not being an integral part of the social system will probably encourage early dropping out and consequent inability to fit into the adult world of work and politics.

MacLeod has made a study of student political attitudes, as related to leadership, by using a small urban school population. He has suggested that his study could be replicated by using a larger population with a greater variety of associated variables (7, p. 80). This study purports to do this and also to further substantiate MacLeod's findings.

IV. ASSUMPTIONS

1. A necessary assumption is that the procedures used to determine students' attitudes constitute a valid approach.

2. Since the instrument used in this study has already been used in other investigations of this nature, it is assumed that it is adequate for the purpose of this particular study.

3. Another assumption is that the students expressed their true opinions and that the items were understood by all students.

V. LIMITATIONS

Any person carrying out a study of this type is aware of certain limitations. Checking the accuracy of the information obtained is very difficult. Selltitz notes the danger of misinterpretation of the questions asked (8, p. 242).

The study was carried out in one city. One cannot justifiably generalize that the results would be similar in another city or in any other area.

There are other variables which may be significant in determining one's political attitudes which have not been taken into consideration. Some of these are ethnicity, religion, race, and family political background, and some schools may encourage political involvement more than others

and this may have an effect upon students' political attitudes.

VI. DELIMITATIONS

It was anticipated that the population attending the city of Edmonton's public high schools would participate in this study. One school, however, chose not to participate. Nine schools participated and supplied 10,019 completed answer sheets. Students who were absent on the day the instrument was administered, did not take part. Those students who did take part, completed the questionnaire in February, March or April of 1967. One should emphasize that this is a study of a high school society, not a total adolescent society. School dropouts have not been included in the sample.

VII. DEFINITIONS OF TERMS

The political attitudes which are measured in this study, have been defined by Angus Campbell. It was thought advisable to consider his definitions adequate. The operational definitions of the attitudes are also included.

Political Efficacy

Campbell defines political efficacy as:

. . . the feeling that individual action does have, or can have, an impact upon the political process, i.e.,

that it is worthwhile to perform one's civic duties. It is the feeling that political and social change is possible and that the individual citizen can play a part in bringing about this change. (1, p. 187).

The operational definition is the score obtained on the following four point scale:

1. Voting is the only way that students like me can have any say about the way the students' council run things.

2. Sometimes students' council activities and business seem so complicated that a student like me cannot really understand what's going on.

3. Students like me don't have any say about what the students' council does.

4. I don't think student council members care much what the students like me think.

Sense of Citizen Duty

Sense of citizen duty may be defined as:

. . . the feeling that oneself and others ought to participate in the political process, regardless of whether such political activity is seen worthwhile or efficacious (1, p. 194).

The operational definition of sense of citizen duty is the score obtained on the following four point scale:

1. So many other students vote in the students' council elections that it doesn't matter much to me whether I vote or not.

2. It isn't so important to vote when you know your candidate doesn't have any chance to win in the students' council election.

3. A good many students' council elections aren't important enough to bother with.

4. If a person doesn't care how an election comes out, he shouldn't vote in it.

The above scales are a modification of those used by Campbell to measure political efficacy and sense of citizen duty (1, pp. 187, 194).

Home Index Scale

Gough's Home Index Scale (3, p. 52-56), has been modified for Canadian usage by Elley. Findings by Elley and Greenfield show that this scale is a better discriminator of socio-economic status than Blishen's Occupational Scale (2, pp. 57-59; 4, p. 59). Its simple vocabulary usage makes it suitable for high school students. The test relies heavily on the acquisition of material goods as an indicator of status.

David Hernandez made the point that social class stratification was not created, nor intended, to serve as anything other than a research tool. Placing individuals in a social class by means of an instrument, utilizing weighted values, is aimed at identifying groups which share certain characteristics as groups and was never meant to apply to

individuals (6, p. 322).

VIII. ORGANIZATION

Chapter II is devoted to a review of significant, related studies which have been conducted in Canada and the United States. Pertinent Canadian studies are those completed by Knill. United States studies to which reference is made, are those by Zibblatt, Havighurst, Hollingshead and Easton.

Chapter III describes the instrument telling how it was administered and how the sample was taken from the total population. The chapter includes some theory related to Guttman scaling and to multiple factor analysis. It was decided to include a full description of the procedure used to develop a Guttman scale, as this may be of value to students of research who wish to use this technique.

Chapters IV and V describe the analysis of the data. Chapter IV is devoted to analysis of variance tests used to determine the relationship of certain demographic factors upon the two political attitudes which have been named "political efficacy" and "sense of citizen duty." Chapter V describes the results of a number of chi-square tests.

The concluding chapter summarizes the finding of the study, suggests some implications, and poses a few problems

not answered by this study. These problems suggest new areas of research.

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CHAPTER II

RELATED LITERATURE

I. POLITICS AND POLITICAL SYSTEMS

"Man is by nature a political animal." (19, p. 1129). These words were written by Aristotle well over two thousand years ago. As families joined together to form communities, it was natural that someone should become the ruler over these, just as it was natural for the eldest of the family to control the family unit. Similarly, a society must have organization and control. Because man is a social animal, he must also be a political animal.

Jenkins suggested that the simple question of what constitutes political relationships and institutions has not, as yet, received a dependable definition. There are only concepts that have been associated with the idea of politics. His concepts were the state and the social relationships that are recognized as political (13, pp. 4-6).

In the early ages of civilization the only existing form of government, other than the family, was the government of the state. This is what political scientists generally study.

Until recently, the social relationships which political action involves, has tended to be neglected. Students realize the necessity of broadening one's concept of

politics to include the interrelationships of individuals. Members of a society should realize that people act politically in their relationships with their superiors and colleagues in an office. It is political action which brings about a decision to make a change or not to make a change at a board meeting, a school staff meeting or a meeting of a club's executive.

Miller has described the essence of a political situation as being someone trying to do something about which there is no agreement and of trying to use some form of government as a means to this achievement (20, p. 14). Conflict is, therefore, a part of politics since disagreement produces conflict.

Agger has defined politics as "that aspect of life in which certain people act to maintain or to shift the patterns of action of government officials." (1, p. 1). Goldstein and Cahill gave their definition of politics as the study of power relationships among people in a system. The political process begins when an individual member of the system believes that the outcomes he presently derives from the system are somewhat less than what he would like. (7, p. 175).

Dahl has defined a political system as "any persistent pattern of human relationships that involves to a significant extent power, rule, or authority." (3, p. 6).

This definition is very broad as it includes the associations within private clubs, business firms, labour unions, religious organizations and even families. Such a definition probably is better suited to a study of this nature. Individuals do not belong to a single political system. An individual may be a member of the political systems of his country, his province, his trade union, or his lodge, along with an almost endless list of other such affiliations.

Warner observed that a society, with any degree of complexity, must have some rank order to perform certain functions necessary for group survival. Such a society will always have some kind of status system which, by its own values, places people in higher or lower positions. This results because of the need for co-ordination and integration.

Those who occupy co-ordinating positions acquire power and prestige. This is inevitable because their actions partly control the behaviour of the individuals who look to them for direction. As a result, a hierarchy forms. The hierarchy may be simple in a small group, but it becomes very complex in a large factory or a large company. This hierarchial structure holds true for political, religious, educational, and other social institutions. The more complex the group and the more diverse the functions and activities, the more elaborate its status system is likely to be. The system of status cannot be eliminated.

It is the administrator's duty to keep it as democratic and egalitarian as possible (25, pp. 21-30).

A sub-society or a sub-culture of the total society is composed of those adolescents who are attending high school. Agger (1), Campbell (2), Hunter (11), and Porter (22) are some of the researchers who have made studies concerning the nature of politics within the adult world. Few similar studies have been made with respect to the adolescents of our society. Studies which have been made indicate that politics and political attitudes are important factors in determining the behaviour of the individual members of the teenage society and also that political attitudes are established at an early age.

II. RELATED STUDIES

David Easton has discussed the political socialization of young people which he sees as a vital determinant affecting the probability of a system persisting over time. He admits that we have little understanding of the nature of one's attachment to a regime and of its developmental patterns as a child matures (5, p. 234).

A study of over twelve thousand elementary school children, undertaken by Easton, indicates that the child's political world begins to take shape well before he enters elementary school. The child's image of the political

world undergoes rapid change during these years. Political learning gets a good start in the family during the pre-school period. By the time the child has completed elementary school, many basic political attitudes have become firmly established.

Easton proceeded a step further and claimed that by the time the child enters high school, at the age of fourteen, his basic political orientations to regime and community have become quite firmly entrenched, so that during his high school years there is little visible change (5, pp. 235-236).

James Davies has supported Easton. He asserted that the politicization process in America is basically complete at the age of fourteen. A further observation he made was that the child who experiences deprivation of physical and social needs fails to achieve patterns of political behaviour which are mature (4, pp. 11-12).

If the political attitudes of our future political leaders and political decision-makers have been determined at an early age, it is important that curriculum builders construct school programs which will insure maximum development of desirable political attitudes. In discussing aims of education, Robert W. Frederick stressed the importance of citizenship and patriotism in our society and also the importance of such training in our schools.

. . . Many men in high public office were once prominent figures in student governments of their schools . . . It is sufficient to say that practice in citizenship is one way to assure that a student will be as good a citizen as an adult (6, p. 8).

Every society must socialize its young if it wishes to maintain itself. Any politically organized society has the same maintenance needs and, consequently, has an additional function, the political socialization of the young. The goal of political socialization is to train individuals so that they become well-functioning members of the political society.

Roberta Siegel has discussed political socialization. Philosophers as early as Plato devoted thought and effort to the question of how to bring about active participation in political socialization within the society. Political values and attitudes are acquired, not inherited. Learning of these attitudes and values takes place as children develop and what they learn has a bearing on later adult behaviour (24, pp. 1-4).

In 1952, Campbell made a study of voting behaviour in the presidential elections in the United States. His analysis was made by using the survey method. His use of the sample survey method created a powerful new instrument for the observation of the political process. It permits the making of inferences about the total population from the characteristics of relatively few cases (2, p. 9).

Campbell stated that although the level of citizen interest and participation in any one election may be explained in terms of such factors as the attractiveness of the candidates and the importance of the election issues, an undertaking of long range trends in level of electoral participation requires the consideration of broader and more enduring political issues and attitudes. To measure attitudes, he has developed the concepts of "sense of political efficacy" and "sense of citizen duty", and then he proceeded to make scales that would measure these. His concept of "sense of political efficacy" was related to a feeling that one's action as an individual is worthwhile and can result in desired improvement in the political situation. "Sense of citizen duty" was related to the feeling of responsibility to participate in political activities (2, p. 187).

The study indicated that the higher one's sense of political efficacy, the higher the level of participation in the 1952 United States presidential election (1, p. 190). He also suggested that education is highly related to the political efficacy scale. Two other socio-economic status variables, income and occupation, were found to be highly related. In addition, men were more highly efficacious than women. Campbell also compared regions. For example, the South ranked significantly lower than other regions of the United States in political efficacy (2, p. 194).

The other political attitude introduced by Campbell was "sense of citizen duty." Alternative labels for this concept might be "sense of political responsibility" or "civic obligation." It was predicted in his study that "sense of citizen duty" would be positively related to the level of political participation. The data gave support to this. Again, education, income and occupation were highly related to "sense of citizen duty." The differences disappeared in the case of sex and age (2, pp. 195-199).

Ziegler has used attitude scales similar to those used by Campbell. His study was concerned with teacher attitudes. Attitudes which he measured were those related to government action, attitudes considered to be typically "middle class" such as thrift, self-reliance and respect for established authority, and a third scale was used to measure teacher attitudes toward "love of country" (28, pp. 6-27).

Since, as Easton claims, the political attitudes of high school students have been firmly established, it appears conceivable that one could use Campbell's survey method and similar scales to study the political attitudes and behaviours of teenagers. In fact, such scales have been developed and used to survey the political attitudes of high school populations.

High school students are active in school activities and in student government. Participation in these activities

involves decision-making with respect to rules or laws just as decision-making is a part of any adult organization, and non-participants are a part of each society.

Ziblatt has stated that promotion of citizenship was one of the prime reasons for extracurricular activities being encouraged in American schools. Extracurricular activities were to serve a purpose for youth similar to the functions served by voluntary organizations for adults. Membership in voluntary organizations was believed to have positive effects on an adult's citizenship competence. A youth participating in extracurricular activities would, therefore, have a greater insight into social processes. The teenager who participates, feels more integrated into the normal high school status system. This feeling of integration is associated with social trust. Those students who are socially trusting, have a more positive attitude toward politics. By "social trust," Ziblatt meant trust or faith in human nature.

Ziblatt has also stated that extracurricular activities are a source of the informal status networks in American secondary schools. The norms upon which these networks are based, do not inculcate values which stress the intrinsic worth of education. Extracurricular activities are supposed to teach the attributes of good citizenship, but his study has found no direct relationship

between participation in high school extracurricular activities and attitudes toward politics. Another of Ziblatt's findings was that teenagers of working class backgrounds participate least, but they are more likely to see the informal status as open. He inferred that these students are insulated by a belief in equality of opportunity from a direct awareness of how the status system actually operates.

Other findings made by Ziblatt were that students, whose fathers have not obtained a high school education, are less likely to participate in school activities. He hypothesized that there is a status structure within the student body. The student who perceived himself to be within the social system, responded positively to social trust, and, in turn, had a positive attitude toward politics (29, pp. 21-30).

The status structures which Ziblatt inferred exist among high school students, are similar to the structures reported to exist in the Canadian society by Porter. He has found that the Canadian society contains a number of elite groups and that these occupy the strategic command posts of the Canadian social structure (22, p. 222).

Patterson pointed out that there are many ways by which citizenship can be learned while an adolescent is in high school. Firstly, there is an assumption that it can be learned through the regular instructional program. Secondly,

it can be learned and revealed in terms of conduct within the school community. Thirdly, it is argued by some that citizenship is learned through limited participation in the management of school affairs. The chief vehicle of this participation is the apparatus of student government.

Whereas most high schools today have some form of student organization, not all educators agree as to their effectiveness as a training technique in citizenship (21, p. 122-133)

A number of descriptive studies of extracurricular activities have been carried out at the University of Alberta. Hutton's study in 1960, "Extra-Curricular Activities in St. Joseph's Boys' High School," suggests that extracurricular activities must have educative value in order that their sponsorship by the school be justified (12, p. 78), and that extracurricular activities should be open to all (12, p. 96). Marles' 1963 study of Edmonton Junior High Schools was intended to set forth the aims and procedures of an ideal extracurricular program (17, p. iii). Kratzmann, in a 1958 study, discovered that only one-third to one-half of the students participate in any extracurricular activities. One of his suggestions was that some of these activities should be scheduled during the school day, making it possible for more students to participate (16, p. 90).

Saylor and Alexander suggested that these activities should be a part of the regular curriculum with credit given for participation. "Extra-class activities comprise a substantial portion of the total learning experience provided secondary school students" (23, p. 291). Wood also supported this in 1962. He suggested that if one is to accept the thesis which is current in the United States regarding curriculum, then all activities sponsored by the school should be an integral part of instruction. This would mean that the existence of student activities can be justified only if they serve some real educational objective. This would also mean that these activities would be held during school time, and under the guidance, supervision, and direction of the professional school staff. The total activity program would be open to all students without discrimination or restriction. Student activities would be financed in the same way as any other part of the total school instructional program. Wood observes, however, that there has been a swing away from this philosophy as restrictions are placed upon participation. For example, students must maintain a certain average to remain on a school team. Wherever school time was given for extra-curricular activities, this has been taken away (26, pp. 201-205).

A. B. Hollingshead made a study of teenagers which he reported in Elmtown's Youth. He traced the relationships

of 390 high school students in the social structure, and the way they participated in selected aspects of the community life, the school, cliques and dates, the church, the job, recreation and pleasure. He concludes that "the class system as it functions in the school and at home, does not help youth to overcome the poor training he has received at home and in the neighborhood" (10, p. 195).

Other findings were that student attendance at athletic events is associated very highly with class position. That is, upper class students tended to be frequent attenders and lower class students seldom attended (8). The number of students elected to the students' council from the upper class was well over twice as great as its representation in the student body (10, p. 195).

A statistical study by MacLeod, related to extra-curricular activities, was completed in 1966. The aim of his study was to determine whether a number of selected variables are related to the election of an individual to a high school students' council. The variables which he selected were social class of parents, membership in voluntary organizations, and attitudes toward the political process. The population from which data were gathered, was the student body of the senior high school of a small Alberta city. He concluded that there were significant factors affecting one's election to a students' council. Executive membership in school clubs was the most significant

predictor of council membership of the variables tested. Participation in a number of extracurricular activities also proved to be a significant predictor (18, p. iii).

Knill has reported a Canadian study in articles published in the 1963 series of the Saskatchewan Bulletin. Emphasizing the importance of the home and family environment, he pointed out that teachers have a little influence upon the attitudes of high school students in certain areas of social activity. If teachers wish to influence their students, they should do so through their parents, or through their peer-groups (15, p. 36).

He also asserted that student activity in the elected offices of the students' council, as well as the voluntary membership organizations of clubs and sports, seem to be a good indicator of involvement in the student society. He hypothesized that students become more active in the high school society as they progress through grades. The relationship between grade level and the proportion of students holding elected positions, is something that is built into the system by tradition, or by rules and administrative controls. Girls participate in students' council and extracurricular activities more than boys.

A measure of political efficacy by Knill indicated that the attitudes held by students were consistent with their activity in school affairs. In addition, girls felt

more politically efficacious than boys (14).

Another conclusion reached by Knill was that the attitudes of Canadian students are not a stereotype of those found among adults, nor are they the same as those found among high school students in the United States or in the European countries (14, p. 56).

In January, 1967, Hemphill and Holdaway performed an analysis using the data that Knill had gathered in Saskatoon. Their conclusions were that students with a higher sense of political efficacy tended to participate more in student council activities. In fact, political efficacy was positively associated with grade, age, extracurricular activities and council membership. It was negatively associated with school size. Sense of citizenship duty associated positively with age and socio-economic area (7).

III. THEORETICAL BASIS FOR THIS STUDY

The total society may be considered to be made up of a number of political systems, such as the political system centred upon a state, a city, a hospital or a school. The student body of a high school may also be considered to make up a political system with each student being a member of that system. The student body has its own student government, exercising limited control over student activities. Some students will become very actively interested within

the political system and others will choose to be disinterested. Some students will be the system's influentials and decision-makers, thus enjoying high status among their peers.

In an efforts to learn more about the adolescent sub-culture, it was thought that a study of their political attitudes within their own political system, would produce worthwhile information. Such a study would help to determine what factors or characteristics tend to be common among the influentials of a student body or among the non-participants. Suggestions were that students who are active in student affairs will have more positive political attitudes than those students who are inactive. It was also thought that there was a relationship between certain demographic characteristics of the students and their political attitudes. Demographic factors which were chosen were sex, grade, age, family income, and parents' education. Student behaviour and beliefs were also investigated for significant relationships to political attitude scales.

IV. HYPOTHESES

Two major hypotheses have been studied. There were:

1. There is no relationship between certain selected variables and political efficacy.
2. There is no relationship between certain selected variables and sense of citizen duty.

Each variable investigated could be used in a statement of sub-hypotheses, but this formality was not considered necessary.

Each factor or variable studied was compared with each of the political attitude scales. The results of the analysis are presented in Chapters IV and V.

V. SUMMARY

This chapter was devoted mainly to a study of related literature. It concludes with a statement of the major hypotheses which have been studied.

The chapter begins with a discussion of politics, political systems and political attitudes. In 1952, Campbell developed political attitude scales which were used to study the political attitudes of American citizens in relation to the presidential elections. Ziegler has used similar scales to study teacher attitudes.

Knill has undertaken a number of Canadian studies in an effort to better understand the adolescent. A significant study to date has been his own Saskatoon study. Other studies were MacLeod's Grande Prairie investigation and Hemphill and Holdaway's survey.

American studies which have been completed are those by Hollingshead, Havighurst, Ziblatt, and Easton. Easton made the interesting statement that the political attitudes

of students are firmly established by the time they reach high school.

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CHAPTER III

RESEARCH METHODOLOGY

This chapter includes a description of the questionnaire used, the method of collecting data, and the method used in drawing a sample from the total population. A full description of scaling procedure, by both the Guttman method and scaling by the use of factor scores is presented. The correlation of the two scaling procedures for both scales is reported. The chapter concludes with a brief description of the statistical techniques used to test the variables which are considered.

I. DATA COLLECTION

The instrument used in collecting these data was a questionnaire developed jointly by Drs. Friesen, Knill and Ratsoy of the Department of Educational Administration, University of Alberta. This study has not made use of every item of the questionnaire which was constructed to gather data related to students' social and professional attitudes as well as political attitudes. This thesis may, therefore, be considered to be one part of a major study with Dr. Friesen researching social attitudes and Dr. Ratsoy studying the professional attitudes of prospective recruits into the teaching profession.

Part 2 of the questionnaire contains eight items. The first four were used to develop a scale for political efficacy and the next four were the basis for a sense of citizen duty scale. The first part of the questionnaire serves a number of purposes. Items 1 to 72 provide demographic information, data related to social attitudes and to student behavioural attitudes. Items 73 to 92 make up a modified version of Gough's Home Index Scale for measuring socio-economic status. The next section; that is, items 93 to 140, were included to provide information for areas of investigation such as the value orientations of high school students and attitudes of students toward the profession of teaching.

Certain items were selected from items 1 to 72 which would provide data related to political attitudes. Demographic, as well as attitudinal and behavioural factors, were used. The Gough Home Index Scale was used to serve as a measure of socio-economic status.

The questionnaire was administered to 10,019 students representing nine senior high schools of the Edmonton Public School System. One high school within the system did not participate in the study. Forms were distributed to the various schools and the administrative staff of each school accepted the responsibility of having the students complete them. The questionnaires were administered during February,

March and April of 1967 to the total population of each school. There was no attempt to test those who were absent.

Answers were placed directly upon I.B.M. answer sheets. These were passed through an optical scorer, which transferred the information to computer cards.

II. VALIDITY OF SCALES

The political attitude scales have been used for at least two previous studies; once by Knill in his Saskatoon High School Study, and again by MacLeod in his Grande Prairie School Study. The scales proved adequate on both occasions. MacLeod obtained a Coefficient of Reproducibility of 92.8 percent for the four items of the sense of citizen duty scale.

III. THE SAMPLE

The total population of 10,019 students was not used for this particular study. A twenty-five percent sample was selected and this was done before the schools were mixed. The selection was done by a computer program¹ and the following procedure was used:

Card number 1 was selected and every fourth card thereafter. The selection should then have been as follows: 1, 5, 9, . . . However, if data on a card were selected, and

1. The program was prepared especially for this study by David Flathman of the Division of Educational Research, University of Alberta

if that card was not complete, it was rejected. This may best be explained by using an example. Suppose card 5 was incomplete, then card number 6 was selected in its place. If card number 6 was incomplete, card number 7 was selected. If this card was complete, it would be accepted and the next card to be selected would be card number 9. If cards 5, 6, 7, and 8 were incomplete, then one card was lost to the sample. This occurred often enough in the sampling procedure to account for the 24.3 percent sampling in place of the intended 25 percent.

Table I provides a summary of the original population of each school and the sample that was selected from each. Seven schools provided an actual sample of better than 24 percent of their population. School number 6, which had originally provided 736 answer sheets to the population, had only 162 of its students selected for the sample. School number 5 was a small school established mainly for students, who had learning difficulties. Of the 184 original answer sheets, only 32 were selected for the sample. This accounted for only 17.39 percent of this school's original population.

There was a possibility that this basis for selection would create a bias. A chi-square test for independence was, therefore, performed on the Gough Home Index Scale distribution. The null hypothesis was that there was not a significant difference in the frequency distribution of the sample

TABLE I

THE NUMBER AND PERCENTAGE DRAWN AS A SAMPLE FROM
TOTAL POPULATIONS OF NINE HIGH SCHOOLS

School No.	1	2	3	4	5	6	7	8	9	Total
Original Population	1340	1025	859	1514	184	736	1370	964	2032	10019
Sample	333	252	214	364	32	162	339	239	497	2432
Per cent	24.85	24.63	24.91	24.04	17.39	21.42	24.74	24.79	24.45	24.3

when compared to the total population. A chi-square value of 0.0537 was calculated. This is not a significant value and thus the null hypothesis was accepted.

Table II provides a comparison of the distribution of the Home Index Scale scores between the original population and the sample. The students were placed in one of five groups based upon their socio-economic scores. Group 1 represents the lowest socio-economic group and group 5, the highest. The percentages provided for each group indicate that the distribution for the sample was very close to the distribution of the original population. The distribution appeared to follow that of a normal curve.

IV. CONSTRUCTION OF ATTITUDE SCALES

When a number of items are used to measure the same attitude, some method of scaling is normally adopted which will allot one score to each individual tested. A scale may be considered to be a device for measuring some particular dimension of attitude. As a weight scale measures weight, and as a measuring tape measures length, an attitude scale measures some particular mental set. Thus, a political attitude scale should be designed to measure some attitude toward the political process as an individual perceives it.

Research workers in the field of attitude analysis are reluctant to use a single question in rating the attitudes of people with regard to complex subjects. One

TABLE II

COMPARISON OF DISTRIBUTIONS OF HOME INDEX SCALE
SCORES BETWEEN SAMPLE AND POPULATION

(Population N = 10,019; Sample N = 2,432)

Group	Score Range	Sample Number	Sample Per cent	Population Number	Population Per cent
1	(0-8)	382	15.70	1,576	15.73
2	(9-10)	421	17.31	1,736	17.31
3	(11-13)	839	34.49	3,474	34.67
4	(14-15)	429	17.63	1,756	17.52
5	(16-20)	361	14.84	1,477	14.74
Total		2,432	100%	10,019	100%

question does not cover all aspects of the attitude held. A set of questions is more likely to do this and hence have greater validity. Increasing the number of responses relative to an attitude will also increase the reliability of the instrument, that is, the results will be more consistent.

Ford points out that the combining of questions to measure a particular attitude may be done simply by "reasonableness," item analysis, multiple factor analysis, or Guttman scaling (2, pp. 508-509).

In this study, multiple factor analysis and Guttman scaling were used and the correlation between the two methods was determined. This aspect of the study was considered to be of major importance because these attitude measures had never been validated in this manner before.

Procedure for Guttman scaling

The eight items of the questionnaire, which are concerned with student political attitudes, have already proven to be scalable for at least two studies, so it was assumed that they would be scalable for this study. However, in the two previous instances the "cutting points" for individual scale items were not the same.

If the items scale perfectly, when based upon four items which have dichotomized responses, then the items would be arranged in such an order that if a respondent has

answered the first positively, he would also answer the others positively. If he answered the first negatively and the second positively, he would answer the next two positively. This is illustrated in Figure 1.

We may consider that question with the least number of positive answers as being the "hardest" question, and the one with the greater number of positive answers as the "easiest" question.

It is doubtful whether a perfect scale has ever been constructed. An individual will frequently select the "hardest" question, perhaps the next hardest and then reject the "easy" question. It is in such a case that a "scale error" has occurred. In actual practice, "scale errors" do occur to some extent. When such an error is committed, the error is recorded and then the individual is assigned to a "perfect" pattern.

<u>Items</u>				<u>Assigned Scale Score</u>
1	2	3	4	
+	+	+	+	4
-	+	+	+	3
-	-	+	+	2
-	-	-	+	1
-	-	-	-	0

Figure 1

Acceptable Response Patterns
and Their Scale Scores

Figure 1 indicates five possible perfect patterns when four items are being scaled. There are sixteen possible patterns. This, therefore, allows for eleven error patterns. Examples of such errors are: (+--+), (-+--) and (+---). If one considers the number of errors, the number of items, and the number of respondents, it is possible to determine the degree of predictability for the scale. This measure is known as the Coefficient of Reproducibility and is determined by the following formula:

$$C.R. = 1 - \frac{\text{Number of errors}}{\text{Number of items} \times \text{number of respondents}}$$

The minimum Coefficient of Reproducibility, which has been accepted in recent studies is 0.90.

In the process of scaling, it is necessary that errors be assigned scale scores. This means that they must be added to one of the five perfect patterns. Certain assumptions are made in doing this:

- (1) It is assumed that there is a minimum error (e.g., the pattern +--+ would be assigned as a ----+).
- (2) When error patterns can be assigned two different ways, the pattern nearest the middle pattern is chosen (e.g., +--+ could be assigned ++++ or --++. In this case, the assignment would be to the latter type).
- (3) If the error pattern cannot be assigned to the middle pattern, then it is assigned to the type with the

greatest frequency (e.g., the pattern +--+ could be ---- or +++, in which case the assignment is made to the type which has the greatest frequency) (4, p. 195).

Although the attitude items in the questionnaire permitted six possible responses which were: agree strongly, agree somewhat, agree slightly, disagree slightly, disagree somewhat, and disagree strongly, it is permissible to dichotomize the response by choosing a cutting point and making all responses to the left of the cutting point, a negative response, and those to the right, a positive response. The suggested criterion is to permit no more than 80 percent in the "easiest" item, and no less than 20 percent in the "hardest" item.

Political efficacy scale

The items produced the greatest discrimination in the following order:

1. Voting is the only way students like me can have any say about how the students' council run things.
2. Sometimes students' council activities and business seem so complicated that a student like me can't really understand what is going on.
4. I don't think student council members care much what the students like me think.
3. Students like me don't have any say about what the students' council does.

The highly efficacious responses were scored positively, and the low efficacy responses were scored negatively. The cutting points and the percentage distribution of responses are shown in Table III. The cutting points were chosen so that 22.4 percent of the responses for item 1, 38.8 percent of item 2, 60.4 percent of item 4, and 74.5 percent of item 3 were given positive scores.

Coefficient of Reproducibility

The Coefficient of Reproducibility for the political efficacy scale was 92.5 percent. This was based upon four items, 2,432 respondents and 734 errors.

Sense of Citizen Duty Scale

The items produced the greatest discrimination in the following order.

(8) If a person doesn't care how an election turns out, he shouldn't vote in it.

(7) A good many students' council elections aren't important enough to bother with.

(5) So many other students vote in the students' council elections that it doesn't matter much to me whether I vote or not.

(6) It isn't so important to vote when you know your candidate doesn't have any chance to win in the students' council election.

TABLE III

FREQUENCY OF RESPONSES AND CUTTING POINTS
FOR POLITICAL EFFICACY SCALE ITEMS

(N = 2,432)

Questionnaire Item	Agree Strongly	Agree Somewhat	Agree Slightly	Disagree Slightly	Disagree Somewhat	Disagree Strongly
(1) Voting is the only way that students like me can have any say about how the students' council run things	1005 (41.3%)	591 (24.3%)	293 (12%)	155 (6.4%)	225 (9.3%)	163 (6.7%)
(2) Sometimes students' council activities and business seem so complicated that a student like me can't really understand what's going on	240 (9.9%)	457 (18.8%)	444 (18.3%)	347 (14.3%)	525 (21.6%)	419 (17.2%)
(4) I don't think student council members care much what students like me think	371 (15.3%)	282 (11.6%)	309 (12.7%)	408 (16.8%)	524 (21.5%)	538 (22.1%)
(3) Students like me don't have any say about what the students' council does	621 (25.5%)	418 (17.2%)	337 (13.9%)	302 (12.4%)	380 (15.6%)	374 (15.4%)

The highly efficacious responses were scored positively. The cutting points and percentages distribution appear in Table IV. The cutting points were chosen so that 25.2 percent of the responses for items 8, 38.7 percent of the responses for item 7, 64 percent of the responses for item 5, and 78.5 percent of the responses for item 6, were given positive scores.

Coefficient of Reproducibility

The Coefficient of Reproducibility for the sense of citizen duty scale was 94.46 percent. This was based upon four items, 2,432 respondents and 539 errors.

Corrections for Error Patterns

As previously mentioned, there are five perfect patterns when scaling four items. There are also eleven possible error patterns. The distribution of these error patterns to perfect patterns is given by Tables Va and Vb. The corrections are made according to the assumptions previously stated. Some patterns contain two errors, therefore two corrections must be made. The total number of responses in the pattern are, therefore, multiplied by two.

Scaling by the Use of Factor Scores

Another method of forming an attitude scale is by the use of multi-factor scores. Basic assumptions of factor

TABLE IV

FREQUENCY OF RESPONSES AND CUTTING POINTS
FOR SENSE OF CITIZEN DUTY SCALE ITEMS

(N = 2,432)

Questionnaire Item	Agree Strongly	Agree Somewhat	Agree Slightly	Disagree Slightly	Disagree Somewhat	Disagree Strongly
(8) If a person doesn't care how an election turns out, he shouldn't vote in it.	1012 (41.6%)	362 (14.9%)	274 (11.3%)	172 - 7%	+ 287 (11.8%)	325 (14.4%)
(7) A good many students' Council elections aren't important enough to bother with	149 (6.1%)	156 (6.4%)	244 (10%)	291 (12%)	652 - (26.8%)	+ 940 (38.7%)
(5) So many other students vote in the students' Council elections that it doesn't matter much to me whether I vote or not	174 (7.2%)	183 (7.5%)	210 (8.6%)	309 - (12.7%)	+ 532 (21.9%)	1024 (42.1%)
(6) It isn't so important to vote when you know your candidate doesn't have any chance to win in the students' council election	86 (3.5%)	109 (4.5%)	115 (4.7%)	212 - 8.7%	+ 576 23.7%	1334 54.8%

TABLE Va

ERROR PATTERN CORRECTIONS FOR
POLITICAL EFFICACY SCALE

Score	4	3	2	1	0
Perfect Patterns	(++++) 232	(-+++) 364	(--++) 531	(---+) 325	(----) 277
Errors	(+++-) 10x1=10	(-++) 54x1=54	(+-++) 142x1=142	(+---) 42x1=42	(-+---) 121x1=121
	(++--) 53x1=53	(-+-+) 92x1=92	(--+-) 124x1=124		(+---) 34x1=34
			(+-+-) 13x2=26*		(++--) 18x2=36*
Total Errors	63	146	292	42	191=734

*Each of these patterns contain 2 errors.

TABLE Vb

ERROR PATTERN CORRECTIONS FOR SENSE
OF CITIZEN DUTY SCALES

Score	4	3	2	1	0
Perfect Patterns	(++++) 270	(-+++) 513	(--++) 519	(----+) 274	(-----) 342
Errors	(+++-) 7x1=7	(-++-) 13x1=13	(--+-) 59x1=59	(+---+) 67x1=67	(-+---) 20x1=20
	(++-+) 33x1=33	(-+-+) 80x1=80	(+-++) 154x1=154		(+----) 56x1=56
			(+-+-)* 21x2=42		(++---)* 4x2=8
Total Errors	40	+ 93	+ 255	+ 67	+ 84=539

*Each of these patterns contain 2 errors.

analysis are:

1. that a battery of intercorrelated variables has common factors running through it, and that the scores of an individual can be represented more economically in terms of these reference factors.
2. that the correlation between two variables can be accounted for by the nature and extent of their factor loadings (3, pp. 44-48).

The eight items of the questionnaire were factor analyzed² by using an I.B.M. 7040 computer. When quartimax, varimax and equamax rotations were applied, two factors emerged. These were called "political efficacy" and "sense of citizen duty." The factor loadings table for the varimax rotation is given in Appendix B. The table indicates that items 1, 2, 3 and 4 form a cluster. Items 4, 5, 6, 7 and 8 also form a cluster, but item 4 has a higher factor loading with factor 2, i.e., political efficacy, and it should, therefore, be placed in that group. Item 8 is low, but its highest factor loading is with factor 1, i.e. sense of citizen duty, and it can, therefore, be justifiably placed with items 5, 6 and 7.

Varimax factor loadings are determined by the matrix multiplication of the unrotated factor matrix by a transformation matrix. This determines the rotation of the axis (3, p. 39). The unrotated factor loadings are included in Appendix B.

2. This program is listed as FA 1000, Division of Educational Research, University of Alberta (August, 1965).

Figure 2 shows the axis rotation and the item cluster. When studying figure 2; one sees the relatively close cluster for items 2, 3 and 4, with item 1 being some distance from these. Similarly, items 5, 6 and 7 form a close cluster with item 8 being separated, but still sufficiently close to the other three to justify being included with them.

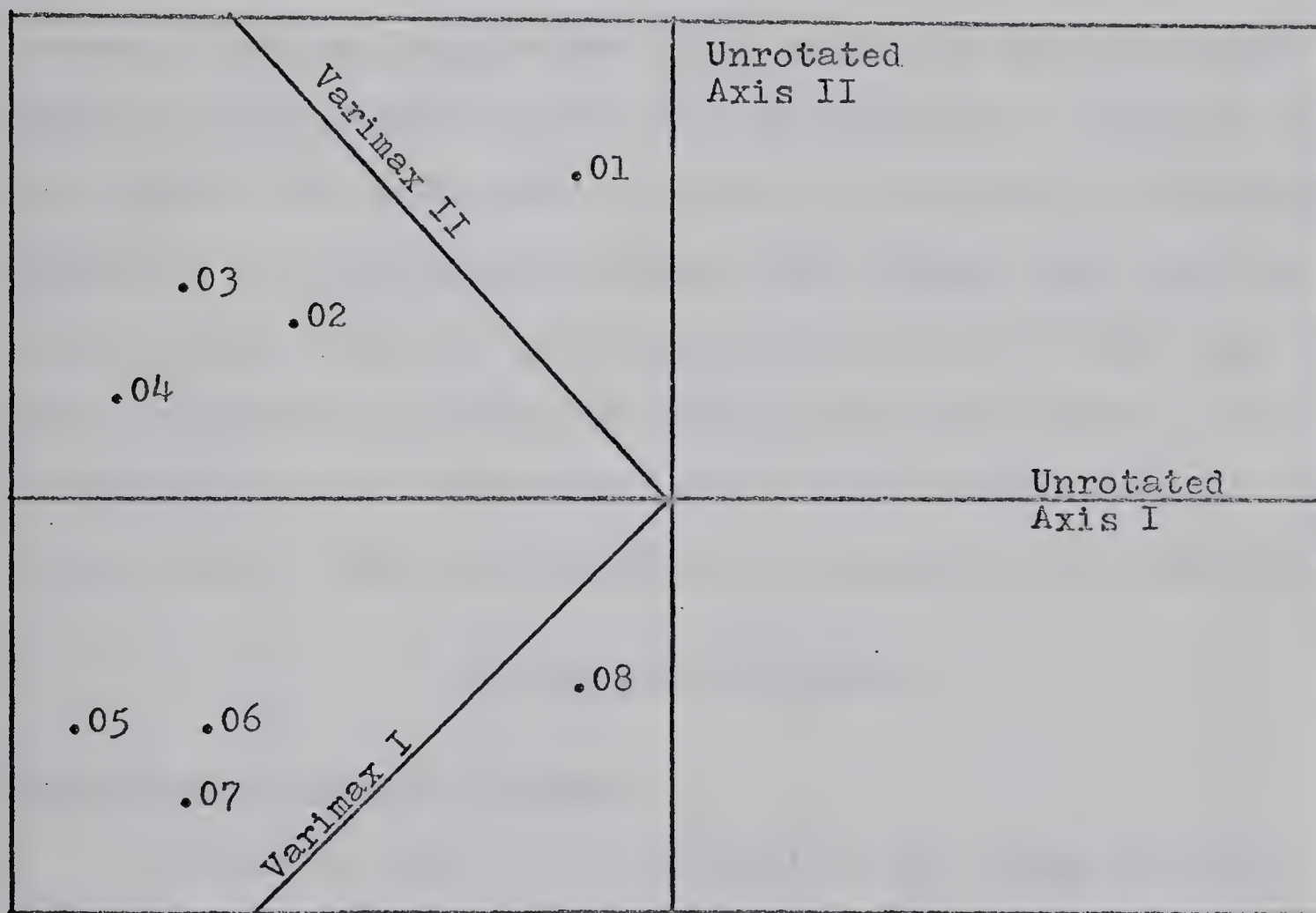


Figure 2

Axis Rotation and Item Cluster

Factor scores were determined for each individual student in the sample, using a mean score of 50 with a standard deviation of 10. The possible range of scores was from 0 to 100. These scores were punched on cards for each

individual student. This entire operation was again performed by a computer program³, developed for the 7040 I.B.M. computer. The factor scores were accepted measures of political efficacy and sense of citizen duty.

Test of Correlation Between the Two Scales

The two attitude measures, political efficacy and sense of citizen duty, after being scaled by two different methods, were further tested for the correlation between the two scales. This was made possible by the use of a computer program⁴. The correlation between the Guttman scale and the factor score scale for political efficacy was 0.7302, and the correlation for sense of citizen duty was 0.8063. Correlations of this nature indicate a high relationship or association. These correlations are summarized in Table VI.

V. STATISTICAL TECHNIQUE

One-Way Analysis of Variance

Ferguson lists three assumptions for using one-way analysis of variance.

1. The distributions of the variables in the populations from which the samples are drawn are normal.
2. The variances in the populations from which the samples are drawn, are assumed to be equal.

3. Program FS100, (August, 1965) Division of Educational Research, University of Alberta.

4. Program Reg. 100, (May, 1966) Division of Educational Research, University of Alberta.

TABLE VI

CORRELATIONS BETWEEN TWO ATTITUDE SCALES

	Guttman Scale for Political Efficacy	Guttman Scale for Sense of Citizen Duty	Factor Score Scale for Sense of Citizen Duty	Factor Score Scale for Political Efficacy
	1	2	3	4
Guttman Scale for Political Efficacy	1.0000	0.2984	0.2351	0.7302
Guttman Scale for Sense of Citizen Duty		1.0000	0.8063	0.1961
Factor Scale for Sense of Citizen Duty			1.0000	0.0011
Factor Score Scale for Political Efficacy				1.0000

3. The effects of various factors on the total variation are additive (1, p. 294).

Analysis of variance is a method for dividing the variation observed in experimental data into different parts, each part assignable to a known source cause or factor. The particular technology was developed by R. A. Fisher, and reported by him in 1923. In its simplest form, the analysis of variance is used to test the significance of the difference between the means of a number of different samples.

The null hypothesis is formulated that the samples are drawn from populations having the same mean. If the variation cannot reasonably be attributed to sampling error, the null hypothesis is rejected, and the alternative hypothesis is accepted.

The significance of the test is given as an F ratio. A large F ratio is taken as evidence that the null hypothesis should be rejected and a ratio, which is near unity, indicates that the null hypothesis should be accepted. Ferguson's F ratio tables were used (1, pp. 408-411).

One-way analysis of variance tests for this study were calculated by a Division of Educational Research Computer Program⁵ with slight modifications necessary for the purposes of this specific study.

A number of variables, which were thought to effect

5. Program AV1002 (November, 1965), Division of Educational Research, University of Alberta.

political efficacy or sense of citizen duty, were tested using both the Guttman scales and the multi-factor score scales. This made it possible to compare results obtained by using both scales. On the basis of these comparisons, it was decided to use the Guttman Scale Scores for the balance of the analysis. This analysis is reported in Chapter IV.

Two-Way Analysis of Variance

Two-way analysis of variance is designed to permit the simultaneous investigation of two experimental variables. Two such variables, for example, may be the age and grade of the students. This type of analysis was used twice to test various combinations of variables.

Chi-square

The statistic chi-square is used in situations where a comparison of observed and theoretical frequencies is required. When the discrepancy between the two is large, the chi-square value is small. Chi-square may be used to test the representativeness of a sample where population values are known such as the test used in Chapter III. This is a suitable test for "goodness of fit." If chi-square is found to be a low value, one may conclude that the sample is not biased and may be considered a random sample (1, pp. 191-196).

A frequent application of chi-square occurs in this

study where the data are comprised of paired observations on two nominal variables. The paired observations are entered in a bivariate frequency table and are spoken of as contingency tables. They are used to study the independence or association of the two variables. For example, in this study, the association or independence of sense of citizen duty and students' sex were tested (1, p. 200).

The data obtained for a number of items were paired with the Guttman scale for political efficacy and sense of citizen duty, and a chi-square value was obtained to test for dependence. Percentage tables were also obtained to assist in the interpretation of the chi-square value. The CROS 1 computer program was used for this part of the analysis⁶. This program provides a chi-square table, a percentage by rows table, and a percentage by columns table. The results of these tests are reported in Chapter V.

VI. SUMMARY

Chapter III has described the instrument used in the study. A chi-square test comparing the population frequencies on the Home Index Scale with those of the sample, failed to indicate a bias. The procedure for Guttman scaling and for factor score scales was also included with a

6. CROS 1 - Cross Classification with Subdivisions. Frequency Tables and Measures of Association. (undated), Division of Educational Research, University of Alberta.

correlation between the two scaling methods.

Correlations of .7302 and .8062 for political efficacy and sense of citizen duty scales respectively, were considered to be very high.

The analysis of the data, first by one-way analysis of variance and secondly by chi-square tests of independence are reported in Chapters IV and V.

REFERENCES FOR CHAPTER III

1. Ferguson, George A. Statistical Analysis in Psychology and Education, Second edition. New York: McGraw-Hill Company, 1966.
2. Ford, R. N. "A Rapid Scoring Procedure for Scaling Attitude Questions," Public Opinion Quarterly XIV (1950) pp. 507-532.
3. Fruchter, B. Introduction to Factor Analysis. Princeton, New Jersey: D. Van Nostrand Company, Inc., 1954.
4. Knill, W. D. "An Analysis of Attitudes Towards the Public Schools," Unpublished Ed. D. Thesis, Graduate School of the University of Oregon, Eugene, Oregon, 1960.

CHAPTER IV

ANALYSIS OF DATA: DEMOGRAPHIC AND ACTIVITY VARIABLES AS RELATED TO POLITICAL EFFICACY AND SENSE OF CITIZEN DUTY AND A COMPARISON BETWEEN TWO SCALING

In the previous chapter the two attitudinal dimensions termed "political efficacy" and "sense of citizen duty" as measured by the two scales used in this study, have been established by two statistical treatments. On the basis of the high correlation between the two procedures to determine each scale, we can express our confidence in the unidimensionality of each measure and the consistency of each method of scaling. However, in this chapter, the analysis of the two independent variables as they relate to such variables as age, grade, school achievement and school participation will be conducted using both the factor scale scores and the Guttman scale scores. This procedure will further assist in validating the two scaling methods.

Age and Grade Relationship with Students' Political Attitudes

It is natural to hypothesize a high correlation between age and grade. The older a student is, the higher is his grade. It should, therefore, be natural to expect similar results when tests of significance are made upon political efficacy or sense of citizen duty using age or grade as the variable.

Tables VIIa and VIIb show that this is not the case.

TABLE VIIa

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING GRADE GROUP
MEANS FOR POLITICAL EFFICACY AND SENSE OF CITIZEN
DUTY AND COMPARISON BETWEEN GUTTMAN SCALE
AND FACTOR SCORE SCALE

(N = 2,432)

Grade	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
10	861	1.91	2.00	49.00	49.37
11	772	1.92	2.05	49.10	49.86
12	799	2.07	2.00	50.45	49.28
F ratio		4.01**	0.44	5.29*	0.77
Probability		0.02	0.60	0.01	0.43
Chi-square		44.76*	9.53		

*significant at .01 level.

**significant at .05 level.

TABLE VIIb

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING AGE GROUP MEANS FOR
 POLITICAL AND SENSE OF CITIZEN DUTY AND COMPARISON BETWEEN
 GUTTMAN SCALE AND FACTOR SCORE SCALE
 (N = 2,432)

Age	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
14 or younger	53	2.21	2.30	51.43	51.40
15	596	1.98	2.08	49.32	50.35
16	682	1.98	2.08	49.52	50.01
17	705	1.95	1.91	49.83	48.66
18 or over	396	1.92	1.96	48.93	48.57
F ratio		0.69	3.15	1.06	4.4*
Probability		0.55	0.02	0.33	0.00
Chi-square		30.55**	22.57		

*significant at .01 level

**significant at .05 level

In Table VIIa, the sample is divided into three grade groups. A one-way analysis of variance test was used to determine the means for political efficacy and sense of citizen duty on the basis of Guttman scales. Significant tests were obtained for political efficacy, but not for sense of citizen duty. Chi-square test results agreed with the one-way analysis of variance results.

When the students were grouped according to age, significant mean differences were obtained for sense of citizen duty on both the Guttman and factor score scales, but there was not a significant difference in means on the political efficacy scale. Chi-square tests did not give the same results. Values were significant for political efficacy, but not for sense of citizen duty.

To pursue this further, it was decided to perform a two-way analysis of variance test involving age and grade as variables and the means based upon each of the attitude scales. Tables VIIIa and VIIIb summarize the results of these tests.

Differences in the means of the rows result from differences in grade. Differences in the means of the columns result from differences in age. Table VIIIa shows how political efficacy scores increase with grade and decrease with age when taken within grades. Younger students in grade ten score highest, but intercell means drop as

TABLE VIIIa

ANALYSIS OF VARIANCE: TWO-WAY CLASSIFICATION SHOWING ROW MEANS,
COLUMN MEANS AND INTERCELL MEANS OF POLITICAL
EFFICACY INVOLVING AGE AND GRADE

Grade	Age					Row Means
	14 and under	15	16	17	18 and over	
X	$\bar{X}_{11} = 2.25$	$\bar{X}_{12} = 1.97$	$\bar{X}_{13} = 1.71$	$\bar{X}_{14} = 1.67$	$\bar{X}_{15} = 1.71$	$\bar{X}_{1...} = 1.91$
XI		$\bar{X}_{22} = 2.14$	$\bar{X}_{23} = 2.07$	$\bar{X}_{24} = 1.67$	$\bar{X}_{25} = 1.52$	$\bar{X}_{2...} = 1.92$
XII		$\bar{X}_{32} = 2.00$	$\bar{X}_{33} = 2.21$	$\bar{X}_{34} = 2.11$	$\bar{X}_{35} = 2.00$	$\bar{X}_{3...} = 2.06$
Column Means	$\bar{X}_{.1} = 2.21$	$\bar{X}_{.2} = 1.98$	$\bar{X}_{.3} = 1.98$	$\bar{X}_{.4} = 1.95$	$\bar{X}_{.5} = 1.92$	$\bar{X}_{...} = 1.97$

Notation System as used by Ferguson, p. 302.

*significant at .01 level

F ratio (Age)	=	17.79*
F ratio (Grade)	=	7.59*
F ratio (Interaction)	=	0.31

TABLE VIIIb

ANALYSIS OF VARIANCE: TWO-WAY CLASSIFICATION SHOWING ROW MEANS,
COLUMN MEANS AND INTERCELL MEANS OF POLITICAL
EFFICACY INVOLVING AGE AND GRADE

Grade	Age					Row Means
	14 and under	15	16	17	18 and over	
X	$\bar{X}_{11.}=2.31$	$\bar{X}_{12.}=2.05$	$\bar{X}_{13.}=1.91$	$\bar{X}_{14.}=1.42$	$\bar{X}_{15.}=1.82$	$\bar{X}_{1..}=2.00$
XI	$\bar{X}_{21.}=2.00$	$\bar{X}_{22.}=2.61$	$\bar{X}_{23.}=2.16$	$\bar{X}_{24.}=1.82$	$\bar{X}_{25.}=1.66$	$\bar{X}_{2..}=2.05$
XII		$\bar{X}_{32.}=2.00$	$\bar{X}_{33.}=2.00$	$\bar{X}_{34.}=1.99$	$\bar{X}_{35.}=2.02$	$\bar{X}_{3..}=2.00$
Column Means	$\bar{X}_{1.}=2.30$	$\bar{X}_{2.}=2.08$	$\bar{X}_{3.}=2.08$	$\bar{X}_{4.}=1.90$	$\bar{X}_{5.}=1.96$	$\bar{X}_{...}=2.02$
Notation System as used by Ferguson, p. 302.						
F ratio (Age)					=	10.12*
F ratio (Grade)					=	8.01*
F ratio (Interaction)					=	0.64

*significant at .01 level.

grade ten students increase in age. There is a slight increase in political efficacy scores for grade ten students, who are eighteen years or older. The decrease in political efficacy mean scores is particularly evident for grade eleven students as they increase in age. Score means for the age groups in grade twelve are quite steady.

It is not the purpose of this study to determine why these results have occurred. However, one may conjecture that the potential dropouts are clustered in the grade eleven older age groups. The older grade ten students show an increase in both political efficacy and sense of citizen duty. Is this because these students are registered in terminal, non-academic classes and are being given assignments which they are able to handle? Do the mean scores of the grade twelve age groups remain steady and high because they form the apex of the student social hierarchy, or is it mainly that they can see that their goal of graduating from high school is about to be realized? Certainly, these findings open an area for further research.

Tables VIIIA and VIIIB show similar trends in both the political attitudes being tested. Figures 2 and 3 assist one in visualizing these trends. Each shows how the younger age groups in grades ten and eleven feel the most efficacious and express a stronger feeling of citizen responsibility.

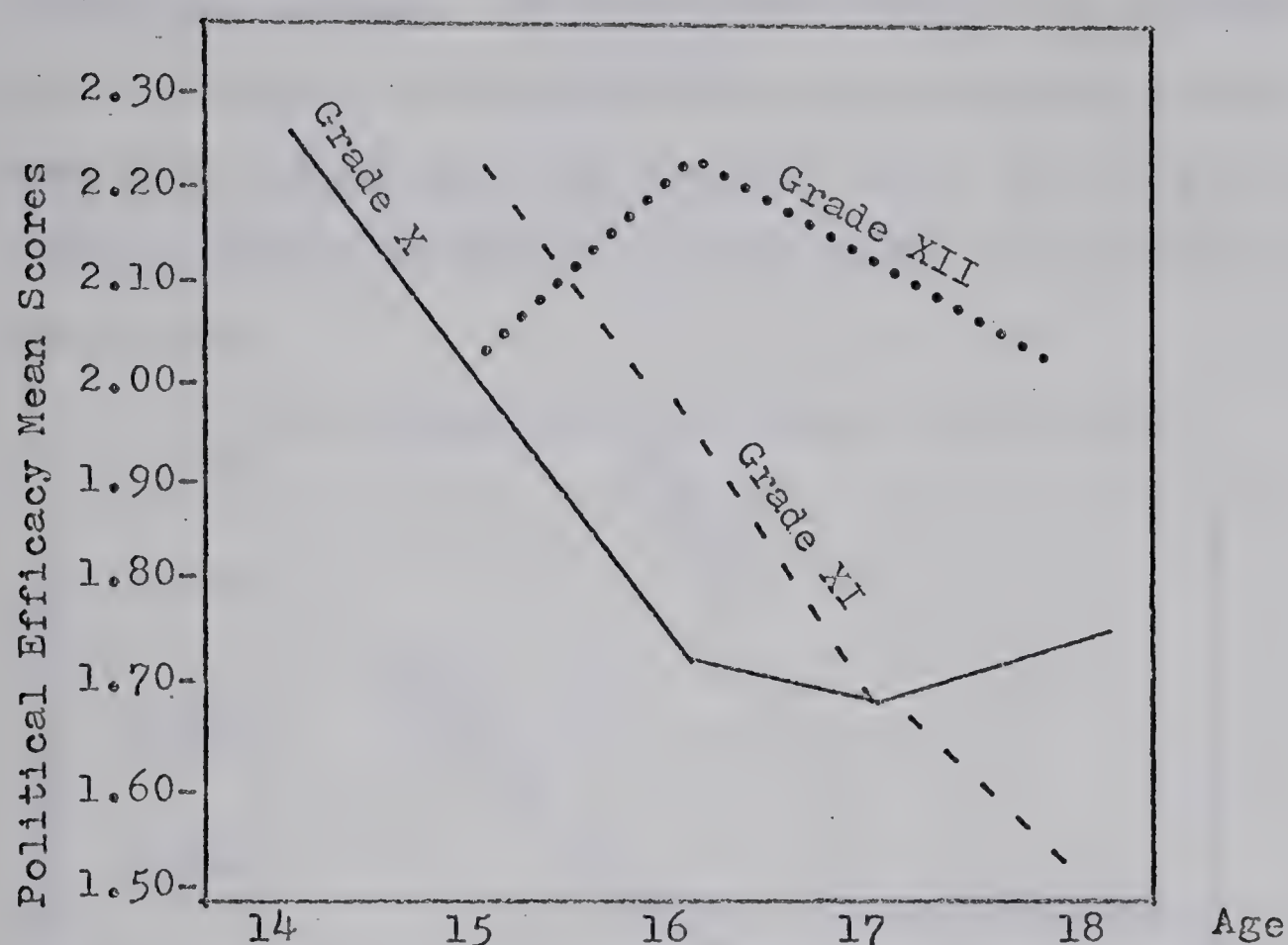


Figure 3

Relationship Between Age Within Grades and Political Efficacy

Figure 3 clearly indicates the decrease in political efficacy within grades ten and eleven as the students increase in age. The maximum mean score for grade twelve is reached at age sixteen, but one must realize that there are few fifteen year olds in grade twelve. Keeping this in mind, one can say that there appears to be a slight decrease in the political efficacy attitude of grade twelve students as one moves from the younger to the older age groups.

Figure 4, on the other hand, shows how the sense of citizen duty attitude remains steady throughout the grade

twelve age groups. The pronounced decline in attitude is again evident for the grade ten and eleven age groups. One must also notice the high attitude score of the grade ten eighteen year old group over the grade ten seventeen year old group.

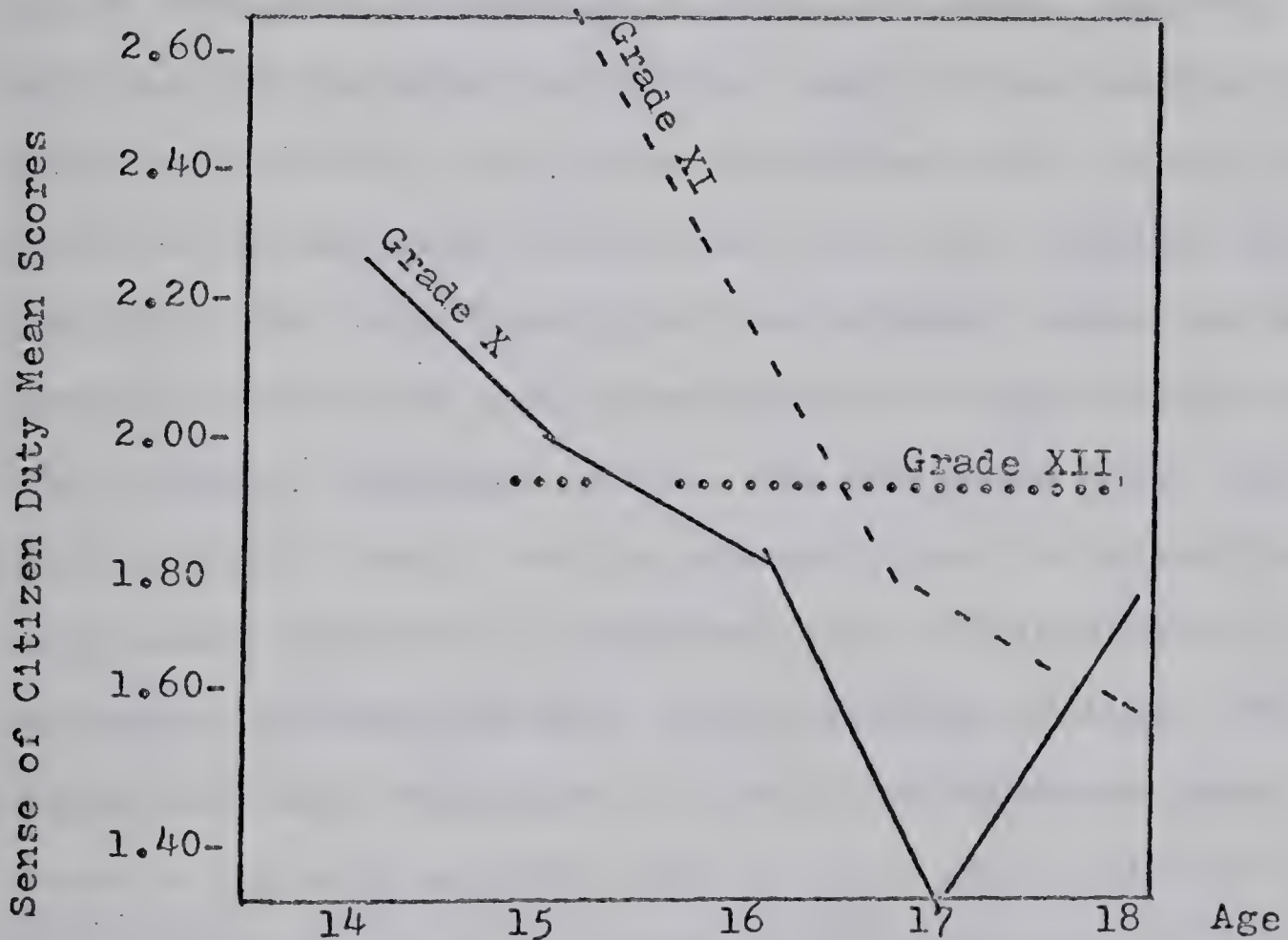


Figure 4

Relationship Between Age Within Grades
and Sense of Citizen Duty

From both figures, we might generalize that there is much greater variability in both political attitudes in grades ten and eleven than in grade twelve. Apparently, the attitudes of students stabilize at the grade twelve level, regardless of age; whereas, the political attitudes of

students in grades ten and eleven vary considerably depending upon the age of the students.

Relationship Between Parents' Education and Students' Political Attitudes

The mothers and fathers of the students were classified according to education level attained. One-way analysis of variance tests based upon Guttman scales of political efficacy and sense of citizen duty, as well as upon factor analysis score scales for each attitude were applied. The relationship of the fathers' education to the students' political attitudes was tested separately from the mothers' education level. All the tests taken were highly significant. As the parents' level of education increased, the mean of the measure of the attitudes of the students increased on both of the scaling systems. The conclusion may, therefore, be made that students whose parents are well educated tend to feel more politically efficacious and tend to express a more positive feeling of citizenship responsibility than do students whose parents are not as well educated. Educated parents may tend to be more active in voluntary organizations as more demands are made upon them. In fact, a 1962 study made by Murray Hausknecht makes mention that those who have a high educational level join voluntary organizations (24, pp. 16-17). They are involved in the politics of these organizations and this, in turn, results in the development of positive

political attitudes. Such attitudes are, in turn, more likely to be adopted and expressed by the children living in these homes.

When comparing the results based upon the Guttman scales with those based upon the factor analysis score scales, it is noticed that the F ratios are higher for the Guttman scales. However, the significance of the F ratios is so great in every case that this does not affect the results. Chi-square tests were also highly significant. Tables IXa and IXb provide a summary of the tests, which have been discussed in this section. These particular tables also give a good illustration of the high correlation between the Guttman scale and the factor score scale. As the means of the various groups increase on one scale, there is a corresponding increase on the other. This gives further validity to the high relationship between the two scales.

Relationship Between School Achievement and Political Attitudes

A test was applied to establish whether there was any relationship between school achievement and expressed political attitudes. Students were grouped according to achievement. In the sample, seventeen students obtained an average of 39 or less, one hundred eighty students averaged between 40 and 49, one thousand two hundred fourteen students in the preceding year averaged between 50 and 64, eight

TABLE IXa

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING FATHER'S EDUCATION
GROUP MEANS FOR POLITICAL EFFICACY AND SENSE OF CITIZEN
AND COMPARISON BETWEEN GUTTMAN SCALE
AND FACTOR SCORE SCALE

(N = 2,432)

Father's Level of Education	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
Elementary	214	1.73	1.82	47.70	47.85
Junior High	785	1.85	1.90	48.78	48.67
High School	974	1.99	2.02	49.48	49.66
Some University	202	2.16	2.24	51.43	50.72
University Degree	257	2.29	2.32	51.84	51.81
F ratio		9.30*	8.46*	8.22*	7.15*
Probability		0.00	0.00	0.00	0.00
Chi-square		45.39*	52.57*		

*significant at .01 level.

TABLE IXb

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING MOTHER'S EDUCATION
GROUP MEANS FOR POLITICAL EFFICACY AND SENSE OF CITIZEN
DUTY AND COMPARISON BETWEEN GUTTMAN SCALE
AND FACTOR SCORE SCALE

(N = 2,432)

Mother's level of education	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
Elementary	146	1.83	1.72	48.98	46.88
Junior High	675	1.84	1.84	49.00	48.17
High School	1279	1.95	2.08	49.26	50.08
Some University	195	2.26	2.22	50.97	50.85
University Degree	137	2.50	2.34	52.74	51.47
F ratio		10.46*	9.59*	5.37*	8.90*
Probability		0.00	0.00	0.00	0.00
Chi-square		60.51*	56.41*		

* significant at .01 level.

hundred thirty five students averaged between 65 and 79 and one hundred eighty six obtained an average mark of 80 or better. These frequencies are provided in Table X along with the results of the tests that were carried out on these data.

F ratios, using both the Guttman and factor score scales, were highly significant. That is, there are significant mean differences in student political attitudes when one compares different levels of achievement. Chi-square tests were also highly significant. These chi-square tests were based only upon the Guttman scales. The similarity of the values is worthy of noting. For political efficacy, the Guttman scale produced an F value of 28.71 and the factor score scale produced a value of 27.88. For sense of citizen duty, the Guttman scale produced an F value of 11.32 and the value on the factor score scale was 11.61. The close similarity of F ratios further indicates the consistency between the two scaling methods. The correlation between the means on the Guttman score scale and the factor score scale should again be noted. Without exception, the means increase on both scales as achievement levels increase, again reinforcing the validity of the scaling techniques.

Participation in Student Government and Political Attitudes

Students were asked whether they had been elected to any school position this year or last year. To this

TABLE X

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING LEVEL OF
ACHIEVEMENT GROUPS FOR POLITICAL EFFICACY AND SENSE
OF CITIZEN DUTY COMPARISON BETWEEN GUTTMAN
SCALE AND FACTOR SCORE SCALE

(N = 2,432)

Level of achievement	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
0-39	17	1.24	1.53	44.00	45.88
40-49	180	1.41	1.81	45.19	46.52
50-64	1214	1.83	1.89	48.43	48.78
65-79	835	2.21	2.20	51.23	50.99
80-100	186	2.38	2.25	53.48	50.71
F ratio		28.71*	11.32*	27.88*	11.61*
Probability		0.00	0.00	0.00	0.00
Chi-square		158.3*	67.26*		

*significant at .01 level.

question, 552 students responded "yes", and the remaining 1,879 answered "no." Once again, the tests as reported in Tables XIa and XIb based upon the political efficacy scale and the sense of citizen duty scale were highly significant. The students who had been elected or who presently held an elected position expressed the more positive attitudes.

The students were then asked, what type of an elected position they held in the school? In this case, 2,045 students replied that they held none, 48 held an office of president or vice-president, 34 held the office of secretary or treasurer, 80 were a committee representative and 225 held some other position. Once again, the one-way analysis tests indicated a very significant difference among the means. Those, who held positions at the time of the study, felt more efficacious, politically. They also showed higher citizenship responsibility. Chi-square tests were highly significant. Table XIb presents a summary of the data.

Relationship Between Participation in Other Activities and Political Attitudes

High school students may be grouped according to their participation in extracurricular activities. When they were asked how many activities they participated in, 1,173 indicated that they participated in none, which represented nearly one-half of the sample. This is considerably better than Kratzmann's finding which indicated that

TABLE XIa

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING ELECTION TO SCHOOL POSITION
 GROUP MEANS FOR POLITICAL EFFICACY AND SENSE OF CITIZEN
 DUTY AND COMPARISON BETWEEN GUTTMAN SCALE
 AND FACTOR SCORE SCALE

(N = 2,432)

	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
Have you been elected to any school position this year or last year?					
Yes	552	2.25	2.24	52.31	50.93
No	1879	1.88	1.95	48.68	49.07
F ratio		40.62*	26.11*	82.66*	39.33*
Probability		0.00	0.00	0.00	0.00
Chi-square		54.62*	27.97*		

*significant at .01 level.

TABLE XIb

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING ELECTED TO OFFICE
 GROUP MEANS FOR POLITICAL EFFICACY AND SENSE OF CITIZEN
 DUTY AND COMPARISON BETWEEN GUTTMAN SCALE
 AND FACTOR SCORE SCALE

(N = 2,432)

Group	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
Hold no position	2045	1.88	1.95	48.68	49.65
President or Vice-President	48	2.29	2.52	54.94	51.71
Secretary or Treasurer	34	2.38	2.33	54.21	51.24
Sports or other committee representatives	80	2.29	2.50	52.86	52.63
Any other position (Editor, etc.)	225	2.48	2.32	53.96	51.75
F ratio		15.50*	10.40*	23.09*	6.75*
Probability		0.00	0.00	0.00	0.00
Chi-square		80.83*	55.57*		

*significant at .01 level

approximately two-thirds of the students of his sample did not participate (5, p. 90). The remaining students were grouped according to the extent of their participation. Of these, 630 indicated that they participated in one activity, 349 participated in two activities, 175 participated in three activities and 105 students took part in four or more activities. The tests for significant differences between the means of the various groups again were highly significant. Those students who participated in extracurricular activities indicated a feeling of greater political efficacy and a greater sense of citizenship responsibility. A summary of tests taken in relation to extracurricular activities is given in Table XIIa.

It is possible that students may not be exceedingly active in extracurricular activities because they are active in organized activities outside of the school. When questioned about this, 849 students indicated that they did not participate in any out-of-school activities, 675 participated in one activity, 511 participated in two activities, 215 participated in three and 182 took part in four or more.

The F ratios obtained in Table XIIb are again highly significant, as are the chi-square tests. The active student is likely to feel the most politically efficacious and the most responsible as a citizen. The study did not attempt to determine whether those students who were active

TABLE XIIa

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING PARTICIPATION IN EXTRACURRICULAR
ACTIVITIES GROUPS MEANS FOR POLITICAL EFFICACY AND SENSE OF CITIZEN
DUTY AND COMPARISON BETWEEN GUTTMAN SCALE
AND FACTOR SCORE SCALE

(N = 2,432)

Participation in extra-curricular activities	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
None	1173	1.77	1.80	47.78	47.88
One	630	2.05	2.05	50.12	50.01
Two	349	2.17	2.30	50.86	51.39
Three	175	2.25	2.53	53.03	53.02
Four or more	105	2.56	2.49	54.77	52.34
F ratio		19.35*	24.91*	24.56*	19.33*
Probability		0.00	0.00	0.00	0.00
Chi-square		94.60*	114.4*		

*significant at .01 level.

TABLE XIIb

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING ORGANIZED OUTSIDE ACTIVITIES
 GROUP MEANS FOR POLITICAL EFFICACY AND SENSE OF CITIZEN
 DUTY AND COMPARISON BETWEEN GUTTMAN SCALE
 AND FACTOR SCORE SCALE

(N = 2,432.)

Number of organized outside activities in which student participates	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
None	849	1.78	1.81	48.16	47.98
One	675	1.99	1.97	50.01	49.28
Two	511	2.16	2.24	50.58	51.10
Three	215	2.08	2.27	50.22	51.43
Four or more	182	2.12	2.23	50.08	50.61
F ratio		9.39*	13.65*	6.20*	11.02*
Probability		0.00	0.00	0.00	0.00
Chi-square		51.25*	64.14*		

*significant at .01 level.

in out-of-school organized activities tended to be the same students who were active in school activities. Pursuing an answer to this could well be a part of another study.

Relationship Between Socio-Economic Status and Students' Political Attitudes

A modified version of Gough's Home Index Scale was used to determine the socio-economic status of the students. The scale consists of twenty items concerned with the acquisition of material goods, family values and the level of education which the parents have attained. For each affirmative answer, the student is given a score of one, thus making a score of twenty the maximum.

The scale has been successfully used in two previous Alberta studies, one by Elley (2) and the other by Greenfield (3). Reference has already been made to these studies in Chapter I.

The score obtained on the scale placed each student in one of five groups. Scores ranging from zero to eight formed the lowest socio-economic group with a total of 382 students. Range nine to ten formed the next group and 421 students fitted into this bracket. The middle group contained 839 students and the range was from eleven to thirteen. Students, who obtained a score of fourteen or fifteen, formed the fourth group and this accounted for another 429. The highest socio-economic group contained

361 students and their scores ranged from sixteen to twenty. This distribution which is given in Table XIIIa, along with the related data, resembled that of a normal curve.

One-way analysis of variance tests and chi-square tests were again highly significant. Those students, whose homes contain a number of material things and whose parents are well educated, tend to score highest on the political efficacy and sense of citizen duty scales.

The Gough Home Index Scale does not contain an item which is directly related to family income. Students were, therefore, categorized into five groups according to the family income as indicated by the students. Again, the students who come from higher income homes showed the greatest degree of political responsibility on both dimensions. The F ratios and the chi-square tests were highly significant. Table XIIIb summarizes the statistical data which is related to family income.

Tables XIIIa and XIIIb again point out the consistency between the Guttman score scale and the factor score scale. As the socio-economic status of the students increases, the means on both scales also increase. Because this consistency has been evident throughout the tests taken to this point, only the Guttman score scale will be used for chi-square tests of independence for the remainder of the study.

TABLE XIIIa

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING SOCIO-ECONOMIC STATUS
 GROUP MEANS FOR POLITICAL EFFICACY AND SENSE OF CITIZEN
 DUTY AND COMPARISON BETWEEN GUTTMAN SCALE
 AND FACTOR SCORE SCALE

(N = 2,432)

Groups based upon Gough Home Index Scale	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
Index 0-8	382	1.71	1.74	47.27	47.81
" 9-10	421	1.85	1.90	48.33	48.72
" 11-13	839	1.93	1.95	49.44	48.92
" 14-15	429	2.04	2.18	50.52	50.68
" 16-20	361	2.36	2.39	52.19	52.13
F ratio		15.18*	16.54*	14.13*	12.01*
Probability		0.00	0.00	0.00	0.00
Chi-square		69.70*	83.97*		

*significant at .01 level.

TABLE XIIIb

ANALYSIS OF VARIANCE: ONE-WAY CLASSIFICATION SHOWING FAMILY INCOME
GROUP MEANS FOR POLITICAL EFFICACY AND SENSE OF CITIZEN
DUTY AND COMPARISON BETWEEN GUTTMAN SCALE
AND FACTOR SCORE SCALE

(N = 2,432)

Estimate of family income level	Number	Guttman Scale Means		Factor Score Means	
		Political Efficacy	Sense of Citizen Duty	Political Efficacy	Sense of Citizen Duty
Below \$2,000.	64	1.70	1.80	45.83	48.72
\$2,000. - \$3,000.	368	1.82	1.82	48.96	48.14
\$4,000. - \$6,999.	1093	1.93	1.93	49.09	49.16
\$7,000. - \$9,999.	534	2.03	2.22	49.67	50.61
\$10,000 or over	373	2.19	2.20	51.68	50.36
F ratio		5.82*	9.29*	7.41*	4.47*
Probability		0.00	0.00	0.00	0.00
Chi-square		43.79*	53.15*		

*significant at .01 level.

SUMMARY

The report given in this chapter has served two purposes. One is that the comparison between the Guttman score scale and the factor score scale strengthens the validity of the attitude scales which are used in the study. The results on the basis of both scales are consistently similar. It is for this reason that the analysis in Chapter V is based only upon the Guttman scaore scale.

The second purpose which the analysis has served is that it is now possible to give a description of the high school citizen who has a highly positive attitude toward the political system of his school. This student will tend to be young for his grade, hold an executive position in the students' government, be active in organizations outside of school, come from a higher socio-economic class home and have parents who are well educated.

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CHAPTER V

ANALYSIS OF DATA: BEHAVIOURAL AND OTHER ATTITUDINAL VARIABLES AS RELATED TO POLITICAL EFFICACY AND SENSE OF CITIZEN DUTY

This chapter contains a report on the relationship between the two political attitudes, "political efficacy" and "sense of citizen duty," and other student attitudes which could be classed as mainly behavioural. As stated in Chapter IV, the decision was made to use only the Guttman scale scores as measures of the political attitudes. This is justifiable because of the proven consistency between these scales and the factor score scales.

In the previous chapter, tests of significance were made using one-way analysis of variance and the chi-square technique. Again, the significance of test results, when comparing the two techniques, were consistent. On this basis, the use of chi-square tests of significance is deemed satisfactory for the purposes of this part of the study.

Relationship Between Students' Sex and Their Political Attitudes

Tables XIVA and XIVb provide a summary of the distribution of boys and girls on the Guttman scales for political efficacy and sense of citizen duty. The sample of 2,432 students was almost evenly divided between 1,213 boys and 1,219 girls. Boys scored lower than girls on both

TABLE XIVA

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND STUDENTS' SEX

Guttman Scale							
Sex	0	1	2	3	4	Totals	
Male	f 240 19.8 %	f 205 16.9 %	f 388 32.0 %	f 237 19.5 %	f 143 11.8 %	f 1213	% 100
Female	181 14.8	161 13.2	423 34.7	303 24.9	151 12.4	1219	100
Totals	421	366	811	294	294	2432	

Chi-square = 23.34; d.f. = 4; significant at .01 level

TABLE XIVb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE
SCORES AND STUDENTS' SEX

Sex	Guttman Scale						Totals
	0	1	2	3	4		
Male	f 245 % 20.2	f 191 % 15.7	f 394 % 32.5	f 268 % 22.1	f 115 % 9.5	f 1213 % 100	
Female	f 177 % 14.5	f 150 % 12.3	f 359 % 29.5	f 338 % 27.7	f 195 % 16.0	f 1219 % 100	
Totals	422	341	753	606	310	2432	

Chi-square = 46.23; d.f. = 4; significant at .01 level

political attitude scales. Chi-square values of 23.34 on the political efficacy scale and 46.23 on the sense of citizen duty scale are significant at greater than the .01 level.

The percentages were included in all of the distribution tables of this chapter as these enable one to give a directional interpretation to the significant chi-square tests. Scores of 0 or 1 on the scales were considered to be low and scores of 3 or 4 were considered to be high.

On the political efficacy scale, 36.7 percent of the boys and 28 percent of the girls scored low. On the other hand, 31.3 percent of the boys and 37.3 percent of the girls scored high. These differences indicate that girls are more politically efficacious than boys.

It is possible to reach the same type of conclusion when the percentage distributions on the sense of citizen duty scale is analyzed. That girls have a greater sense of citizen duty than boys is evident in that 35.9 percent of the boys scored low in comparison with 26.8 percent of the girls, while 43.7 percent of the girls scored high in comparison with 31.6 percent of the boys.

Other distributions support the statement that girls are more active than boys in the high school political system. In fact, girls outnumbered the boys in every category in degrees of participation in extracurricular activity. Girls

held over one hundred more elected positions than boys in a period of two years. With respect to elected positions presently held, there were twenty-five male presidents and vice-presidents, as compared with twenty-three females, but the girls outnumbered the boys in every other category by a considerable margin.

These data, therefore, show that Edmonton high schools are really a female world, politically, and this is probably true for other Canadian high schools. Supporting this is the study made by Hemphill and Holdaway (4) as well as MacLeod's study (5).

However, this is opposite to Campbell's research findings in relation to the adult society of the United States in 1954. Campbell pointed out that the male population was more interested and played a more prominent role in politics than did the female population (1, p. 70). Men are also more inclined than women to feel that the average citizen can make his influence felt upon governmental policy (1, p. 191).

Relationship Between Church Attendance and Students' Political Attitudes

The students were asked to reply to the question, have you joined or do you intend to join a church? A chi-square of 14.69 for political efficacy is significant at greater than the .01 level. When the sense of citizen duty

scale was used, a chi-square of 30.32 was obtained and this is also significant at greater than the .01 level. Tables XVa and XVb provide a summary of the distribution of scores on the political efficacy and sense of citizen duty scales.

If one looks at the percentages given in the tables, it is seen that 35.9 percent of those who answered "yes" scored high on the political efficacy scale, while 32 percent of those who answered "no" obtained a high score. On the other hand, 29 percent of those answering "yes" scored low, while 36.4 percent of those answering "no" scored low. These statistics enable one to state that those students, who have jointed, or who intend to join a church, feel more politically efficacious than those students who appear to be uninterested in attending church.

Similar results were obtained when data based upon the sense of citizen duty scale were studied. Of those who answered "yes", 40.9 percent of the students scored high and 27.5 percent scored low. On the other hand, 33 percent of the students who answered "no" scored high and 37 percent scored low. Students who are interested in church and religion have a stronger feeling of citizen responsibility.

Havighurst reported that girls are more active in church than boys. Teenagers, who are active in church activities, tend to come from high socio-economic status homes.

TABLE XVa.

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND STUDENTS' INTEREST
IN JOINING A CHURCH

Have you joined or do you intend to join a church?	Guttman Scale						Totals
	0	1	2	3	4		
Yes	f 230 % 16.0	f 195 % 13.6	f 495 % 34.5	f 344 % 24	f 171 % 11.9	f 1435	% 100
No	f 191 % 19.2	f 171 % 17.2	f 316 % 31.7	f 196 % 19.7	f 143 % 12.3	f 997	% 100
Totals	f 421	f 366	f 811	f 540	f 294	f 2432	

Chi-square = 14.69; d.f. = 4; significant at .01 level

TABLE XVb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE
SCORES AND STUDENTS' INTEREST
IN JOINING A CHURCH

Have you joined or do you intend to join a church?	Guttman Scale						Totals
	0	1	2	3	4		
	f	f	f	f	f	f	
Yes	212	182	454	378	209	1435	100
No	210	159	299	228	101	997	100
Totals	422	341	753	606	310	2432	

Chi-square = 30.32; d.f. = 4; significant at .001 level

They enjoy academic success, and obtain higher adjustment scores. He concludes by inferring that the church co-operates with the school and home to help the most successful boys and girls to grow up well (3, pp. 91-95).

The findings of this study have been such as to support Havighurst's conclusion. We have already obtained statistical support which shows that students from high socio-economic status homes, and who enjoy academic achievement tend to score high on political attitude scales. The fact that he has apparently adjusted well to his role as a student results in his participation within other social groups, such as church groups, and he has a positive attitude toward these organizations. The poor achiever is a misfit in his school and also in other community organizations.

Relationship Between a Student's Popularity and Political Attitudes

A number of items were included in the questionnaire which would test students' popularity or students' aspirations toward being popular. One such item asked the students to select what they thought was most important in making a boy popular with the girls in their particular school. Tables XVIa and XVIb provide a summary of the results.

A choice was given between having a nice car, obtaining high grades, being an athletic star, or being in

TABLE XVia

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE SCORES
AND WHAT STUDENTS BELIEVE IS IMPORTANT
IN MAKING BOYS POPULAR WITH GIRLS

What is important in making a boy popular with girls?	Guttman Scale											
	0		1		2		3		4		Totals	
	f	%	f	%	f	%	f	%	f	%	f	%
Having a nice car	66	21.6	62	20.3	105	34.3	48	15.7	25	8.2	306	100
High grades	17	18.3	17	18.3	31	33.3	18	19.4	10	10.8	93	100
Being an athletic star	64	13.9	63	13.7	168	36.5	110	23.9	55	12.0	460	100
A member of leading crowd	274	17.4	224	14.2	507	32.2	364	23.1	204	13.0	1573	100
Totals	421		366		811		540		294		2432	

Chi-square = 28.27; d.f. = 12; significant at .01 level

TABLE XVib

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE SCORES
AND WHAT STUDENTS BELIEVE IS IMPORTANT IN
MAKING BOYS POPULAR WITH GIRLS

What is important in making a boy popular with girls?	Guttman Scale											
	0		1		2		3		4		Totals	
	f	%	f	%	f	%	f	%	f	%	f	%
Having a nice car	75	24.5	57	18.6	81	26.5	60	19.6	33	10.8	306	100
High grades	19	20.4	18	19.4	22	23.7	21	22.6	13	14.0	93	100
Being an athletic star	66	14.3	43	9.3	141	30.7	134	29.1	76	16.5	460	100
A member of leading crowd	262	16.7	223	14.2	509	32.4	391	24.9	188	12.0	1573	100
Totals	422		341		753		606		310		2432	

Chi-square = 44.59; d.f. = 12; significant at .01 level

the leading crowd. Of those students who thought that "owning a nice car" was the most important factor, 41.9 percent scored low on the political efficacy scale and 23.9 percent scored high. This group scored lowest on the scale and were, therefore, the least efficacious politically and also had the lowest sense of citizen duty. Those students who selected "being an athletic star" as the most important single item, scored highest on the political efficacy scale with 27.6 percent having scored low and 35.9 percent scoring high. Those students who selected "being a member of the leading crowd", as the most important factor for a boy to be popular with the girls, fit in between these other two groups with 31.6 percent having scored low and 36.1 percent scoring high. A chi-square value of 28.27 is significant beyond the .01 level.

When the same item was tested with the sense of citizen duty scale, 43.1 percent of the 306 students who rate "a nice car" as the important factor, scored low and 30.4 percent scored high. The most highly responsible group appeared to be those who rated "being an athletic star" as most important. The percentage of this group scoring high was 45.6 percent and 23.6 percent scored low. A chi-square value of 44.59 is highly significant.

A further analysis of popularity was made by asking the students whether or not they felt they were a part of

the leading crowd. The responses were such that 591 students believed that they were, and 1,841 students replied that they were not.

A summary of the data related to this item is provided in Tables XVIIa and XVIIb. When using the political efficacy scale, a chi-square value of 6.1 is not significant, but when the sense of citizen duty scale was used an obtained chi-square of 10.85 is significant at the .05 level. Of those who felt they were a part of the leading crowd, 27.4 percent scored low and 40.8 percent scored high on the sense of citizen duty scale. A directional difference can be detected as 32.6 percent of the "out" group scored low and 36.7 percent scored high. This indicates that those, who are members of the leading crowd, feel a greater sense of civic responsibility. These are probably the students who are in a position to influence change.

Another item which may measure "popularity" was the question, what is the major characteristic necessary to be a member of the leading crowd? Students could choose: good looks, friendliness, academic excellence, money and athletic ability. Tables XVIIIa and XVIIIb provide a summary of related data and of chi-square tests.

The students felt that "friendliness" was the key to becoming a member of the leading crowd as 1,264 members made this choice, which represents one-half of the sample. Along

TABLE XVIIa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND WHETHER STUDENTS ARE A PART
OF THE LEADING CROWD

Are you a part of the leading crowd?	Guttman Scale					Totals
	0	1	2	3	4	
Yes	f 104 % 17.6	f 90 % 15.2	f 184 % 31.1	f 133 % 22.5	f 80 % 13.5	f 591 % 100
No	f 317 % 17.2	f 276 % 15.0	f 627 % 34.1	f 407 % 22.1	f 214 % 11.6	f 1841 % 100
Totals	421	366	811	540	294	2432

Chi-square = 6.1; d.f. = 4; not significant

TABLE XVIIb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE
SCORES AND WHETHER STUDENTS ARE A PART
OF THE LEADING CROWD

Are you a part of the leading crowd?	Guttman Scale								Totals	
	0	1	2	3	4	f	%			
Yes	f 96 % 16.2	f 66 % 11.2	f 188 % 31.8	f 155 % 26.2	f 86 % 14.6	f 591	% 100			
No	326 17.7	275 14.9	565 30.7	451 24.5	224 12.2	1841				
Totals	422	341	753	606	310	2432				

Chi-square = 10.85; d.f. = 4; significant at .05 level

TABLE XVIIIa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND CHARACTERISTICS NECESSARY
TO BE IN WITH LEADING CROWD.

Necessary characteristics to be in leading crowd	Guttman Scale											
	0		1		2		3		4		Totals	
	f	%	f	%	f	%	f	%	f	%	f	%
Good looks	119	19.7	82	13.8	181	30.5	146	24.6	67	11.3	593	100
Friendliness	186	14.7	201	15.9	452	35.8	275	21.8	150	11.9	1264	100
Academic excellence	9	14.1	10	15.6	28	43.8	12	18.8	5	7.8	64	100
Money	80	24.0	46	14.0	88	26.8	68	20.7	46	14.0	328	100
Athletic ability	29	15.8	27	14.8	62	33.9	39	21.3	26	14.2	183	100
Totals	421		366		811		540		294		2432	

Chi-square = 33.81; d.f. = 16; significant at .01 level

TABLE XVIIIb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE
SCORES AND CHARACTERISTICS NECESSARY TO BE
IN WITH LEADING CROWD

Necessary characteristics to be in leading crowd	Guttman Scale					Totals
	0	1	2	3	4	
Good looks	f 98 % 16.5	f 84 % 14.2	f 180 % 30.4	f 154 % 26.0	f 77 % 13.0	f 593 % 100
Friendliness	221 17.5	173 13.7	400 31.6	305 24.1	165 13.1	1264 100
Academic excellence	16 25.0	11 17.2	12 18.8	17 26.6	8 12.5	64 100
Money	59 18.0	54 16.5	100 30.5	84 25.6	31 9.5	328 100
Athletic ability	28 15.3	19 10.4	61 33.3	46 25.1	29 15.8	183 100
Totals	422	341	753	606	310	2432

Chi-square = 15.32; d.f. = 16; not significant

with this, 593 students chose "good looks," 328 chose "money," 183 chose "athletic ability" and only 64 chose "academic excellence."

A chi-square value of 33.81 based upon the political efficacy scale is significant at the .01 level. The group of students who scored highest on the scale was that one choosing "athletic ability." The students who scored lowest selected "money" as the means to be in the leading crowd. The sample failed to produce a significant test when the sense of citizen duty scale was used.

Students were also asked the question, if you could be remembered here at school for one of the things listed below, which one would you want it to be? The responses were: outstanding student, athletic star, and the most popular. This time the students favored "outstanding student," with 43.8 percent of the sample making this choice. Students would rather be remembered as having been "most popular" than having been an "athletic star." Those students who would like to be remembered most for having been an "outstanding student" scored highest on the political efficacy scale and on the sense of citizen duty scale. Chi-square tests were significant beyond the .01 level on both scales. Tables XIXa and XIXb provide a summary of the data.

If a student chooses to be outstanding in his academic work, it appears that he may have to forego being popular and

TABLE XIXa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND ONE'S REASON FOR BEING
REMEMBERED AT SCHOOL

Would like to be remembered as	Guttman Scale								Totals	
	0		1		2		3		4	
	f	%	f	%	f	%	f	%	f	%
Outstanding student	168	15.8	147	13.8	340	31.9	248	23.3	162	15.2
									1065	100
Athletic star	100	15.7	106	16.6	243	38.1	129	20.3	59	9.3
									637	100
Most popular	153	21.0	113	15.5	228	31.2	168	22.3	73	10.0
									730	100
Totals	421		366		811		540		294	
									2432	

Chi-square = 33.40; d.f. = 8; significant at .01 level

TABLE XIXb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE
SCORES AND ONE'S REASON FOR BEING
REMEMBERED AT SCHOOL

Would like to be remembered as	Guttman Scale					Totals	
	0	1	2	3	4	f	%
Outstanding student	f 145 % 13.6	f 143 % 13.4	f 344 % 32.3	f 279 % 26.2	f 154 % 14.5	1065	100
Athletic star	132 20.7	82 12.9	194 30.9	156 24.5	73 11.5	637	100
Most popular	145 19.9	116 15.9	215 29.5	171 23.4	83 11.4	730	100
Totals	422	341	753	606	310	2432	

Chi-square = 25.01; d.f. = 81 significant at .01 level

being a member of the leading crowd. At least, being an outstanding student by no means guarantees that one will be popular or that one will be a member of the leading crowd. It is likely that many students would forego being an outstanding student in order to be popular with their peer group, even though they would like to be remembered as outstanding students. These students still scored high on the two political attitude scales.

Relationship Between Students' Attitude Toward Parents, Peer Group, Teachers, School and Political Attitudes

A number of items of the questionnaire could be grouped as a measure of student attitudes toward their parents, their teachers and school and their own peer group. Chi-square tests were used to relate these to the political attitude scales.

Students were asked which one of these would be hardest to take: parents' disapproval, teachers' disapproval, or breaking with a friend? Tables XXa and XXb summarize the data obtained in relation to this item. It is important to note that there was practically an even division in choice between "parents' disapproval" and "breaking with a friend," while few selected "teachers' disapproval." Chi-square tests using both political attitude scales, failed to produce a value which would indicate significance. This was one of the few items that failed to

TABLE XXa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND STUDENTS' ATTITUDE TOWARDS
OTHER PEOPLES' DISAPPROVAL

Which is hardest to take?	Guttman Scale					Totals
	0	1	2	3	4	
Parents' disapproval	f 199 % 17.1	f 176 % 15.1	f 379 % 32.6	f 269 % 23.1	f 140 % 12.0	f 1163 % 100
Teachers' disapproval	23 18.9	18 14.8	39 32.0	30 24.6	12 9.8	122 100
Breaking with friend	199 17.3	172 15.9	393 34.3	241 21.0	142 12.4	1147 100
Totals	421	366	811	540	294	2432

Chi-square = 2.86; d.f. = 8; not significant

TABLE XXb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE
SCORES AND STUDENTS' ATTITUDE TOWARDS
OTHER PEOPLES' DISAPPROVAL

Which is hardest to take?	Guttman Scale						Totals
	0	1	2	3	4		
Parents' disapproval	f 198 % 17.0	f 148 % 12.7	f 370 % 31.8	f 281 % 24.2	f 166 % 14.3	f 1163 % 100	
Teachers' disapproval	19 15.6	19 15.6	39 32.0	28 23.0	17 13.9	122 100	
Breaking with friend	205 17.9	174 15.2	344 30.0	297 25.9	127 11.1	1147 100	
Totals	422	341	753	606	310	2432	

Chi-square = 9.50; d.f. = 3; not significant

produce a significant test.

Tables XXIa and XXIb provide a summary of the data related to the question, which items below fit most of the teachers at your school? Approximately one-fifth of the students had a rather negative attitude toward their teachers. They indicated that teachers were not interested in teenagers. On the other hand, two-fifths of the sample indicated that teachers did understand student problems, and that they were of assistance. Almost as many felt that their teachers were willing to help, but that they did not understand the problems of the teenage group. The students who indicated a negative attitude in this respect scored lowest on both the political efficacy and sense of citizen duty scales. Those with the more positive attitudes toward their teachers, scored highest on the two political scales. Chi-square values of 68.83 on the political efficacy scale and 44.92 on the sense of citizen duty scale are both significant.

The students were also asked the following question, among the things you strive for during your high school days, which of the following is most important to you? Their responses were: pleasing your parents, learning as much as possible in school, living up to your religious ideals, being accepted and liked by other students, and pleasing the teacher. Tables XXIIa and XXIIb provide a summary of

TABLE XXia

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND STUDENTS' ATTITUDE
TOWARDS THEIR TEACHERS

Student feelings about teachers	Guttman Scale							
	0		1		2		3	
	f	%	f	%	f	%	f	%
They understand problems of teenagers and assist them	127	12.5	140	13.7	369	36.2	239	23.4
							145	14.2
Totals								1020
Not interested in teenagers	131	27.7	80	16.9	115	24.3	95	20.1
							52	11.0
Totals								473
They seem willing to help, but don't understand problems of teenagers	163	17.4	146	15.5	327	34.8	206	21.9
							97	10.3
Totals								939
Totals	421		366		811		540	
							294	
Totals								2432

Chi-square = 68.83; d.f. = 8; significant at .001 level

TABLE XXib

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE
SCORES AND STUDENTS' ATTITUDE
TOWARDS THEIR TEACHERS

Student feelings about teachers	Guttman Scale											
	0		1		2		3		4		Totals	
	f	%	f	%	f	%	f	%	f	%	f	%
They understand problems of teenagers and assist them	133	13.0	131	12.8	339	33.2	270	26.5	147	14.4	1020	100
Not interested in teenagers	121	25.6	73	15.4	136	28.8	96	20.3	47	9.9	473	100
They seem willing to help, but don't understand problems of teenagers	168	17.9	137	14.6	278	29.6	240	25.6	116	12.4	939	100
Totals	422		341		753		606		310		2432	

Chi-square = 44.92; d.f. = 8; significant at .001 level

TABLE XXIIa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND STUDENTS' IMMEDIATE
IDEALISTIC GOALS

	Guttman Scale								Totals			
	0	1	2	3	4							
Immediate goals												
Pleasing parents	f 100	f 69	f 135	f 103	f 40	f 447	% 22.4	% 15.4	% 30.2	% 23.0	% 8.9	% 100
Maximum learning	120	104	262	173	109	768	15.6	13.5	34.1	22.5	14.2	100
Living to religious ideals	10	14	35	40	17	116	8.6	12.1	50.2	34.5	14.7	100
Being accepted and liked by students	188	176	373	222	127	1086	17.3	16.2	34.3	20.4	11.7	100
Pleasing teacher	3	3	6	2	1	15	20.0	20.0	40.0	13.3	6.7	100
Totals	421	366	811	540	294	2432						

Chi-square = 36.13; d.f. = 16; significant at .01 level

TABLE XXIIb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE
SCORES AND STUDENTS' IMMEDIATE
IDEALISTIC GOALS

	Guttman Scale										Totals
	0		1		2		3		4		
	f	%	f	%	f	%	f	%	f	%	
Immediate goals											
Pleasing parents	71	15.9	69	15.4	156	34.9	95	21.3	56	12.5	447
Maximum learning	104	13.5	99	12.9	247	32.2	216	28.1	102	13.3	768
Living to religious ideals	18	15.5	18	15.5	35	30.2	32	27.6	13	11.2	116
Being accepted and liked by students	222	20.4	158	14.1	312	28.7	261	24.0	138	12.7	1086
Pleasing teacher	7	46.7	2	13.3	3	20.0	2	13.3	1	6.7	15
Totals	421		366		811		540		294		2432

Chi-square = 34.99; d.f. = 16; significant at .01 level

the data related to this item.

It is consistent with earlier results that 1,086, or 44.7 percent of the sample, selected "being accepted and liked by the other students." An encouraging 31.6 percent selected "learning as much as possible in school." Only .06 percent of the student sample felt that "pleasing the teacher" was the most important thing.

Those students who selected "maximum learning" as the most important item, scored highest on the political efficacy scale. The least politically efficacious group were those students who selected "pleasing parents."

The results based upon the sense of citizen duty scale are similar to those based upon the political efficacy scale. Chi-square values of 36.13 for the political efficacy scale and 34.99 for the sense of citizen duty scale are significant.

Again, the forces acting upon students is indicated by their responses to this item. The most frequent choice was "being accepted and liked by other students." This would also indicate that students want to be popular, and that they want to be a member of the leading crowd. They are idealistic in wanting to learn as much as possible in school, but this tends to take second place to whatever action they feel they must take in order to be accepted by their peer group.

Students were then asked if they considered their school experiences to be satisfactory. Tables XXIIIa and XXIIIb provide a summary of the data that was collected on this item. According to this data, 86.2 percent of the student sample were satisfied with their school experiences. The remaining 13.8 percent indicated that they were not completely satisfied. Those, who indicated satisfaction, scored highest on both the political efficacy and the sense of citizen duty scales. Highly significant values of chi-square were obtained for both scales. It is interesting that so many students claim to be quite satisfied with their school experiences, yet they still complained about their teachers' lack of understanding.

A possible explanation for this phenomenon is that students perceive the teachers' lack of understanding as one aspect of school life which they must learn to tolerate. This lack of understanding is a universal situation between all adults and adolescents.

Relationship Between Students' Aspirations and Political Attitudes

Teachers who have counselled grade nine students in city schools are well aware of the common answer to the question, what do you intend to do when you have completed your high school education? No matter what the student's ability is, there is a good chance that his answer will be

TABLE XXIIIa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE SCORES
AND SATISFACTION STUDENTS EXPRESSED
WITH SCHOOL EXPERIENCES

Are your school experiences satisfactory?	Guttman Scale								Totals			
	0		1		2		3			4		
	f	%	f	%	f	%	f	%		f	%	
Yes	344	16.4	314	15.0	709	33.8	473	22.6	257	12.3	2097	100
No	77	23.1	52	15.6	102	30.5	67	19.8	37	11.1	335	100
Totals	421		366		811		540		294		2432	

Chi-square = 13.2; d.f. = 4; significant at .01 level

TABLE XXIIIb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE SCORES
AND SATISFACTION STUDENTS EXPRESSED
WITH SCHOOL EXPERIENCES

Are your school experiences satisfactory?	Guttman Scale						Totals
	0	1	2	3	4		
	f	f	f	f	f	f	
Yes	355 16.9%	278 13.3%	648 30.9%	537 25.6%	279 13.3%	2097	100%
No	67 20.1	63 18.9	105 31.4	69 20.4	31 9.3	335	100
Totals	422	341	953	606	310	2432	

Chi-square = 17.97; d.f. = 4; significant at .01 level

that he expects to go to university. If this is really their ambition, a low percentage of the group actually succeed in realizing their objectives. Cheal reported that eleven percent of all young people in Canada, with ages ranging from eighteen to twenty-one, were enrolled in universities in 1960 (2, p. 44).

When the students in the sample were asked to indicate the level of education they expect to have attained ten years from now, their idealistic tendencies were also borne out. Tables XXIVa and XXIVb provide a summary of the data related to this item.

When using the political efficacy scale, those who expected to obtain a professional degree scored highest. Those students who did not expect to graduate from high school or who named this as the upper limits of their educational aspirations scored lowest. The majority (51.3 percent) of the students who did not intend to finish high school scored low on the political efficacy scale, 39.8 percent of those who hoped to graduate from high school scored low but only 22.5 percent of those who hoped to obtain a university degree fell into the same range. On the other hand, 50.2 percent of those aspiring to obtain a professional degree scored high and only 24.8 percent of those aspiring to graduate from high school scored high. A chi-square value of 160.96 is highly significant statistically.

TABLE XXIVa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE SCORES AND
LEVEL OF EDUCATION STUDENTS EXPECT TO
ATTAIN TEN YEARS FROM NOW

Expected highest level of education	Guttman Scale								Totals			
	0		1		2		3			4		
	f	%	f	%	f	%	f	%		f	%	
Not finish high school	12	29.3	9	22.0	17	41.5	0	40.0	3	7.3	41	100
High school or technical school graduate	231	20.1	227	19.7	406	35.3	205	17.8	81	7.0	1150	100
Some university	44	14.0	47	15.0	109	34.7	75	23.9	39	12.4	314	100
University degree (B.A. etc.)	94	13.9	58	8.6	218	32.3	191	28.3	113	16.8	674	100
Professional degree	40	15.8	25	9.9	61	24.1	69	27.3	58	22.9	253	100
Totals	421		366		811		540		294		2432	

Chi-square = 160.96; d.f. = 16; significant beyond .01 level

TABLE XXIVb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE SCORES AND
LEVEL OF EDUCATION STUDENTS EXPECT TO
ATTAIN TEN YEARS FROM NOW

Expected highest level of education	Guttman Scale						Totals					
	0		1		2			3		4		
	f	%	f	%	f	%		f	%	f	%	
Not finish high school	13	31.7	9	22.0	7	17.1	6	14.6	6	14.6	41	100
High school or technical school graduate	252	21.9	192	16.7	330	28.7	246	21.4	136	11.3	1150	100
Some university	54	17.2	30	9.6	103	32.8	79	25.2	48	15.3	314	100
University degree (B.A.etc.)	64	9.5	83	12.3	229	34.0	204	30.3	94	13.9	674	100
Professional degree	39	15.4	27	10.7	84	33.2	71	28.1	32	12.6	253	100
Totals	422		341		753		606		310		2432	

Chi-square = 86.55; d.f. = 16; significant beyond .01 level

The results obtained when using the sense of citizen duty scale are similar. Students, expecting to obtain a university degree and those aspiring toward a professional degree, scored highest. Those students, who felt that they would not complete high school, again scored lowest. A chi-square value of 86.5 is highly significant.

In conclusion to the discussion of this item, it is possible to state that as the students' level of educational aspirations increased, they felt increasingly politically efficacious and increasingly responsible as a citizen.

The students were also asked what they expected their yearly income would be ten years from now. Tables XXVa and XXVb provide a summary of these responses. Approximately 10 percent of the students expected to be earning more than twelve thousand dollars, 20 percent expected to be earning between nine and twelve thousand dollars, and another 40 percent expected to be earning between six and nine thousand dollars. The remaining 32 percent expected to earn less than six thousand dollars. Those students choosing the nine to twelve thousand dollar range scored highest on the political efficacy scale.

A chi-square value of 44.1 is significant beyond the .01 level. Similar results were obtained when the sense of citizen duty scale was used. A chi-square of 29.8 is significant at the .02 level.

TABLE XXVa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND STUDENTS' EXPECTED
INCOME TEN YEARS HENCE

Expected future income	Guttman Scale											
	0		1		2		3		4		Totals	
	f	%	f	%	f	%	f	%	f	%		
Below \$3000.	14	16.9	13	15.7	39	47.0	13	15.7	4	4.8	83	100
\$3000. to \$5999.	109	15.9	112	16.3	248	36.1	157	22.9	61	8.9	687	100
\$6000. to \$8999.	177	18.6	135	14.2	318	33.4	208	21.8	114	12.0	952	100
\$9000. to \$12000.	69	14.4	72	15.1	145	30.3	107	22.4	85	17.8	478	100
Over \$12000.	52	22.4	34	14.7	61	26.3	55	23.7	30	12.9	232	100
Totals	421		366		811		540		294		2432	

Chi-square = 44.18; d.f. = 16; significant at .01 level

TABLE XXVb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE
SCORES AND STUDENTS' EXPECTED
INCOME TEN YEARS HENCE

Expected future income	Guttman Scale								Totals			
	0		1		2		3				4	
	f	%	f	%	f	%	f	%	f	%	f	%
Below \$3000.	22	26.5	9	10.8	24	28.9	16	19.3	12	14.5	83	100
\$3000. to \$5999.	129	18.8	105	15.3	214	31.1	168	24.5	71	10.3	687	100
\$6000. to \$8999.	147	15.4	141	14.8	280	29.4	248	26.1	136	14.3	950	100
\$9000. to \$12000.	71	14.9	55	11.5	158	33.1	125	26.2	69	14.4	478	100
Over \$12000.	53	22.8	31	13.4	77	33.2	49	21.1	22	9.5	232	100
Totals	422		341		753		606		310		2432	

Chi-square = 29.85; d.f. = 16; significant at .02 level

The students were asked which characteristics they considered to be most important for success in life. The respondents chose from money, athletics, personality, academic achievement or friendliness. A summary of the responses related to this item appears in Tables XXVIa and XXVIb. Those students, who selected "money" as being the most important factor for success, rated lowest on the political efficacy scale. Students, who selected "personality" in response to the question, rated highest on the political efficacy scale. Their score was only slightly different from those students who had selected "friendliness," or "academic achievement." A chi-square value of 35.3 is highly significant.

When the sense of citizen duty scale was used, those who chose "money" again scored lowest. Students, who chose "friendliness" scored highest, but again, those who had chosen "academic achievement" or "personality" also scored high. A chi-square value of 42.7 is highly significant.

In summing up this study of students' aspirations to the future, it appears that they may be divided into three categories. There is a group of students who feel that personality, high achievement, and friendliness are the key to success and these score high on both political attitude scales. Students feel that athletics is of no importance to future success. The group of students who feel that "money"

TABLE XXVla

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE SCORES AND
CHARACTERISTICS CONSIDERED IMPORTANT
TO SUCCESS IN LIFE

Characteristics important to success in life	Guttman Scale					Totals
	0	1	2	3	4	
Money	f 56 % 26.7	f 37 % 17.6	f 54 % 25.7	f 42 % 20.0	f 21 % 10.0	f 210 % 100
Athletics	f 0 % 0.0	f 3 % 60.0	f 0 % 0.0	f 2 % 40.0	f 0 % 0.0	f 5 % 100
Personality	f 213 % 15.6	f 208 % 15.3	f 451 % 33.3	f 322 % 23.6	f 169 % 12.4	f 1363 % 100
Academic achievement	f 78 % 17.8	f 62 % 14.2	f 151 % 33.6	f 93 % 21.3	f 53 % 12.1	f 437 % 100
Friendliness	f 74 % 17.7	f 56 % 13.4	f 155 % 37.2	f 81 % 19.4	f 51 % 12.2	f 417 % 100
Totals	f 421	f 366	f 811	f 540	f 294	f 2432

Chi-square = 35; d.f. = 16; significant at .01 level

TABLE XXVib
RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY SCALE SCORES AND
CHARACTERISTICS CONSIDERED IMPORTANT
TO SUCCESS IN LIFE

Characteristics important to success in life	Guttman Scale					Totals
	0	1	2	3	4	
Money	f 63 30.0 %	f 36 17.1 %	f 61 29.0 %	f 32 15.2 %	f 18 8.6 %	f 210 100 %
Athletics	f 1 20.0	f 1 20.0	f 2 40.0	f 1 20.0	f 0 0.0	f 5 100
Personality	f 229 16.8	f 187 13.7	f 428 31.4	f 352 25.8	f 167 12.3	f 1363 100
Academic achievement	f 73 16.7	f 57 13.0	f 134 30.7	f 116 26.5	f 59 13.0	f 437 100
Friendliness	f 56 13.4	f 60 14.4	f 128 30.7	f 105 25.2	f 68 16.3	f 417 100
Totals	f 422	f 341	f 753	f 606	f 310	f 2432

Chi-square = 42.74; d.f. = 16; significant at .01 level

assures success in society are the least politically efficacious and lack a sense of citizen duty.

Relationship Between After-School Activities and Students' Political Attitudes

A number of items in the questionnaire were intended to provide information about students' after-school activities. Students were asked for information related to time spent doing homework every night; time spent watching television; how many nights per week they were out with the gang; and how often they attended school activities such as basketball games.

Time spent in doing homework was divided into five categories. These were: none, less than one hour, one to two hours, two to three hours, and three or more hours. Tables XXVIIa and XXVIIb provide a summary of data related to this item. Approximately 16 percent claimed that they did more than two hours of homework five nights a week and 42.5 percent said that they did one to two hours of homework per night. The 332 students, who claimed to do no homework, made up 13.7 percent of the sample.

A chi-square value of 91.0, when using the political efficacy scale, is highly significant. Those students, who spent three or more hours per weekday doing homework, scored highest on the scale. The students' political efficacy score tended to decrease as the time spent doing homework decreased. The sense of citizen duty scale produced similar results.

TABLE XXVIIa

RELATIONSHIP BETWEEN POLITICAL EFFICACY
SCALE SCORES AND TIME SPENT
DOING HOMEWORK

Hours per weekday	Guttman Scale								Totals			
	0	1	2	3	4	f	%	f	%			
None	f 90	f 68	f 93	f 56	f 25	f 332	% 27.1	% 20.5	% 28.0	% 16.9	% 7.5	% 100
Less than one hour	f 126	f 117	f 236	f 123	f 66	f 668	% 18.9	% 17.5	% 35.3	% 18.4	% 9.9	% 100
One to two hours	f 153	f 137	f 367	f 243	f 133	f 1033	% 14.8	% 13.3	% 35.5	% 23.5	% 12.9	% 100
Between two and three hours	f 41	f 32	f 84	f 80	f 48	f 285	% 14.4	% 11.2	% 29.5	% 28.1	% 16.8	% 100
Three or more hours	f 11	f 12	f 31	f 38	f 22	f 114	% 9.6	% 10.5	% 27.2	% 33.3	% 19.3	% 100
Totals	f 421	f 366	f 811	f 540	f 294	f 2432						

Chi-square = 91.06; d.f. = 16; significant at .01 level

TABLE XXVIIb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY,
SCALE SCORES AND TIME SPENT
DOING HOMEWORK

Hours per weekday	Guttman Scale										Totals	
	0		1		2		3		4			
	f	%	f	%	f	%	f	%	f	%		
None	89	26.8	59	17.8	85	25.6	77	23.2	22	6.6	332	100
Less than one hour	143	21.4	118	17.7	193	28.9	146	21.9	68	10.2	668	100
One to two hours	143	13.8	123	11.9	351	34.0	267	25.8	149	14.4	1033	100
Between two and three hours	36	12.6	24	8.4	95	33.3	83	29.1	47	16.5	285	100
Three or more hours	11	9.6	17	14.9	29	25.4	33	28.9	24	21.1	114	100
Totals	422		341		753		606		310		2432	

Chi-square = 97.22; d.f. = 16; significant at .01 level

The obtained chi-square value of 97.2 is significant well beyond the .01 level.

The high correlations, as indicated by the chi-square values between amount of homework and a feeling of political efficacy, indicates that those students who feel very responsible toward their studies also feel integrated in their schools and that their actions can be effective. They also have a sense of civic responsibility.

There are many attractions which lure students from their home studies. One which has caused some concern to teachers and parents is television. The students were asked how much time they spent watching television on a weekday. The possible responses were the same as the question pertaining to time spent on doing homework. Tables XXVIIIa and XXVIIIb summarize the elicited responses to this item. Approximately 33 percent of the students never watched television or they watched it less than one hour per day, while 12 percent spent at least three hours per day watching programs, apparently without much discrimination as to what the program happened to be. Two-thirds of the student body watched television at least one hour per day.

An inverse relationship was found between political efficacy and the amount of time students watch television. Those students who seldom watch television tend to score highest on the political efficacy scale, and students who

TABLE XXVIIIa

RELATIONSHIP BETWEEN POLITICAL EFFICACY
SCALE SCORES AND TIME SPENT
WATCHING TELEVISION

Time spent watching television	Guttman Scale										Totals	
	0		1		2		3		4			
	f	%	f	%	f	%	f	%	f	%		
None or almost none	56	16.5	40	11.8	90	26.5	88	26.0	65		339	100
Less than one hour per day	73	15.6	55	11.7	140	29.9	135	28.8	66	14.1	469	100
One to two hours	141	16.3	135	15.6	302	34.8	192	22.1	97	11.2	867	100
Between two and three hours	99	21.6	76	16.6	164	35.7	70	15.3	50	10.9	459	100
Three or more hours per day	52	17.4	60	20.1	115	38.6	55	18.5	16	5.4	298	100
Totals	421		366		811		540		294		2432	

Chi-square = 79.37; d.f. = 16; significant at .01 level

TABLE XXVIIIb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY
SCALE SCORES AND TIME SPENT
WATCHING TELEVISION

Time spent watching television	Guttman Scale							
	0	1	2	3	4	Totals		
None or almost none	f 47 13.9 %	f 34 10.0 %	f 112 33.0 %	f 98 28.9 %	f 48 14.2 %	f 339	% 100	
Less than one hour per day	65 13.9	51 10.9	141 30.1	144 30.7	68 14.5	469	100	
One to two hours	136 15.7	135 15.6	284 32.8	204 23.5	108 12.5	867	100	
Between two and three hours	87 19.0	75 16.3	134 29.2	103 22.4	60 13.1	459	100	
Three or more hours per day	87 29.2	46 15.4	82 27.5	57 19.1	26 8.7	298	100	
Totals	422	341	753	606	310	2432		

Chi-square = 65.6; d.f. = 16; significant at .01 level

spend considerable time watching television tend to score low on the scale.

From table XXVIIIa it can be seen that of those students who claim that they seldom watch television, 45.2 percent scored high on the political efficacy scale; of those who watch less than one hour per day, 42.9 percent scored high; of those who watch television one to two hours per day only, 33.3 percent scored high. Only 26.2 percent of those who watched television between two and three hours per day scored high. The television "addicts" who watch television at least three hours per day, scored lowest with only 23.9 percent falling into the high category. The chi-square value of 79.4 is highly significant

Similar results were obtained when the sense of citizen duty scale scores were used. A chi-square value of 65.6 was obtained and this is highly significant.

Shayon suggested that teenagers seek, in television, to satisfy basic needs. A child, whose basic needs are not satisfied, develops a craving for violence and fantasy which drives him continually to mass media, particularly television (7, p. 35). Schramm concluded that frustrated children tend to try to work out some of their aggression through television fantasy. Those, who have unsatisfactory relationships with other children their own age group, are the ones who seem to retain the fantasy (6, p. 120-121). Students, who

spend hours watching television apparently are not integrated with their school and their peers. This accounts for the low scores on the political efficacy and sense of citizen duty scales.

Teenagers are peer groups orientated, and as such want to spend all their leisure time with their peer group. The students were asked how many evenings they spent with the gang. Tables XXIXa and XXIXb provide a summary of their responses. A large number, 42.6 percent, of the student sample went out two or more times each week, and 27.9 percent indicated that they never went out during the week. Those students who did not go out with the gang on weekdays, tended to score highest on the political efficacy scale. The obtained chi-square value of 35.2 is highly significant. Similar conclusions were made by using the sense of citizen duty scale. The chi-square value of 17.17 is significant at the .05 level.

Some students become very involved with school extra-curricular activities; others do not become involved at all. One popular activity is attending basketball games and this was chosen as a representative activity. The relationship between political attitudes and student attendance at basketball games was analyzed. Attendance was categorized as having attended none, less than half the games, and more than half the games and the responses are tabulated in

TABLE XXIXa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND NUMBER OF EVENINGS
OUT WITH THE GANG

Evenings out per week	Guttman Scale											
	0		1		2		3		4		Totals	
	f	%	f	%	f	%	f	%	f	%	f	%
None	124	18.3	107	15.8	245	36.1	121	17.8	82	12.1	679	100
One	93	13.0	103	14.3	224	31.2	190	26.5	108	15.0	718	100
Two or more	204	19.7	156	15.1	342	33.0	229	22.1	104	10.0	1035	100
Totals	421		366		811		540		294		2432	

Chi-square = 35.17; d.f. = 8; significant at .01 level

TABLE XXIXb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY
SCALE SCORES AND NUMBER OF EVENINGS
OUT WITH THE GANG

Evenings out per week	Guttman Scale						Totals
	0	1	2	3	4		
None	f 118	f 111	f 200	f 165	f 85	f 679	% 100
	% 17.4	% 16.3	% 29.5	% 24.3	% 12.5		
One	f 100	f 96	f 250	f 183	f 89	f 718	% 100
	% 13.9	% 13.4	% 34.8	% 25.5	% 12.4		
Two or more	f 204	f 134	f 303	f 258	f 136	f 1035	% 100
	% 19.7	% 12.9	% 29.3	% 24.9	% 13.1		
Totals	422	341	753	606	310	2432	

Chi-square = 17.17; d.f. = 8; significant at .05 level

Tables XXXa and XXXb. More than one-half the sample indicated that they hadn't attended any basketball games and only 15 percent indicated that they attended more than half the games. There is a positive relationship between attendance and the two political attitude scales. The political efficacy scale produced a chi-square value of 50.5 and the sense of citizen duty scale produced a value of 72.9. Both of these values are highly significant.

Again, the fact that students who attended basketball games scored high on the political efficacy and sense of citizen duty scale, can be interpreted as indicating that they have been integrated into their school's political and social system. They have adjusted and they are not a problem to the school administrators. However, one cannot rejoice over the fact that over one-half of the sample had never attended a basketball game throughout the year. These students are not integrated with the school and they may be a problem to the school and to the community. It is these students who must be especially considered by school administrators when they are planning a school program.

SUMMARY

Many significant relationships were established between the two political attitudes and the other attitudinal and behavioural variables. These are summarized in point

TABLE XXXa

RELATIONSHIP BETWEEN POLITICAL EFFICACY SCALE
SCORES AND ATTENDANCE AT
BASKETBALL GAMES

Attendance at basketball games	Guttman Scale										Totals	
	0		1		2		3		4			
	f	%	f	%	f	%	f	%	f	%		
None	258	19.9	228	17.6	428	33.1	260	20.1	121	9.3	1295	100
Less than half	119	15.4	101	13.1	253	32.8	185	24.0	114	14.8	792	100
More than half	44	12.1	37	10.1	130	35.6	95	26.0	59	16.2	365	100
Totals	421		366		811		540		294		2432	

Chi-square = 50.45; d.f. = 8; significant at .01 level

TABLE XXXb

RELATIONSHIP BETWEEN SENSE OF CITIZEN DUTY
SCALE SCORES AND ATTENDANCE
AT BASKETBALL GAMES

Attendance at basketball games	Guttman Scale										Totals	
	0		1		2		3		4			
	f	%	f	%	f	%	f	%	f	%		
None	273	21.1	223	17.2	380	29.3	283	21.9	136	10.5	1295	100
Less than half	105	13.6	92	11.9	244	31.6	211	27.3	120	15.5	772	100
More than half	44	12.1	26	7.1	129	35.3	112	30.7	54	14.8	365	100
Totals	422		341		753		606		310		2432	

Chi-square = 72.89; d.f. = 8; significant at .01 level

form below.

1. High School girls scored higher than boys on both scales.

2. Students who showed church affiliation tended to score highest on both scales.

3. Students who thought that athletic stars were most popular with the girls scored highest on both scales. Those who would choose "having a nice car" scored low.

4. Members of the leading crowd revealed a greater sense of civic responsibility, but did not necessarily reveal a feeling of political efficacy.

5. Students who were of the opinion that money is a major factor in becoming a member of the leading crowd scored lowest on the political efficacy scales. Those who chose "athletic ability" rated highest.

6. Students who would like to be remembered for "academic achievement" scored high on both attitude scales.

7. Students who have a positive attitude toward their teachers also tended to express more positive political attitudes than the dissatisfied student.

8. Students who attempted to achieve "maximum learning" in school scored highest on both political attitude scales.

9. Students who intended to graduate from university had more positive political attitudes than students who did not aspire to attend university.

10. Students who aspired to be "big" money earners scored lower than the more conservative type.

11. Students who were of the opinion that money is a basic factor to success in life scored lowest on the scales. Students who chose "friendliness," "personality" or "academic achievement" scored highest.

12. Students who spent most time doing homework had more positive political attitudes.

13. Students who spent the least time watching television had the more positive political attitudes.

14. Students who did not go out with the gang during week nights had the more positive political attitudes.

15. Students who participated in extracurricular activities such as attending basketball games, tended to have more positive political attitudes.

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CHAPTER VI

SUMMARY, RECOMMENDATIONS FOR FURTHER STUDY AND IMPLICATIONS

The purpose of this chapter is to provide a summary of the study, make recommendations for further research when need for such has been made evident by this study and to suggest certain implications for educators.

I. SUMMARY OF THE STUDY

Purpose

This study attempted to investigate students' political attitudes as they perceive their political effectiveness in their high school life. Two political attitudes have been studied; namely, "political efficacy" and "sense of citizen duty." Political efficacy is defined as the feeling that individual action can and does have an impact upon the political process. Sense of citizen duty is defined as the feeling that one ought to participate in the political process.

School administrators, teachers and other school personnel might benefit if this study could provide them with further general knowledge and understanding of the students with whom they are in daily contact. This would naturally benefit the student, the person for whom the school exists.

Procedure

The main hypotheses of the study were stated in general terms and selected items of the questionnaire related to these hypotheses. Each item tested with the two political attitudes represented a sub-hypothesis to the two general statements.

The sample consisted of 2,432 students, which were selected from 10,019 Edmonton Senior High School students, attending nine high schools who had completed the questionnaire.

The statistical tests used were one-way analysis of variance, two-way analysis of variance, and chi-square. Scores obtained by factor analysis and the Guttman method were used to produce scales for political efficacy and sense of citizen duty. The correlation between the two scaling techniques for political efficacy was 0.730 and 0.806 for sense of citizen duty. In every case, if one scale produced a significant test for either political efficacy or sense of citizen duty, the other scale would give a similar result.

Results

A number of factors were found to be related to political efficacy and sense of citizen duty. These may be considered as demographic, attitudinal or behavioural in nature.

The Gough Home Index Scale was used to determine the

the socio-economic level of the student's home. Chi-square tests provided definite evidence that students with a high socio-economic rating scored highest on the political attitude scales.

A number of single factors, which may be used to determine socio-economic level, were also tested. From the information gathered, it is possible to say that if a student's father or mother is well educated, the student will probably score high on the political efficacy and the sense of citizen duty scales. There is also a direct relationship between the family income and the student's score on both scales.

There is a relationship between student behaviour and political attitudes. Students who achieve well in school feel politically efficacious and have a sense of citizen responsibility. Students who spend a considerable amount of time doing homework scored high on both political attitude scales. The results are reversed when one considers time spent watching television and political attitudes; that is, those who spend most time watching television scored lowest on the political attitude scales.

The active student holds favorable political attitudes. The activities may be student government, extra-curricular, clubs or out-of-school organizations such as church activities. There are clear indications that the

most highly efficacious and politically responsible students are active in all of these. At the same time, there are clear indications that these students are the best achievers.

There is a relationship between students' political attitudes and certain other attitudes which they hold. Students who realize the value of education, score high on political efficacy and sense of citizen duty scales. Students who feel politically efficacious and have a sense of civic duty, do not complain about their school experiences. The ambitious student, the one who aspires to reach the top, will score high on both the attitude scales. If he tends to over-emphasize the power of money, he scores low on these scales.

Another significant finding of the study is that our high schools' political system is dominated by the female sex. Do teenagers consider the filling of student government positions to be a woman's role? It is possible that the boys consider such activities as being rather unmanly and they would prefer to do their strutting on the athletic field. This probably applied more to lower middle class students than to upper class students.

In conclusion, students who feel integrated in their schools have the most positive political attitudes. As individuals they feel effective within the political system and they feel responsible as a citizen. The integrated

students are those who accept the same values as those expressed by the schools. These are doing homework, attending games, avoiding "addiction" to television watching, etc. These students come from homes which reflect the same values as the schools. Their parents are educated and they belong to the higher socio-economic classes. The percentage of integrated students in the schools is not large. The problem then is, how can administrators improve the situation?

II. RECOMMENDATIONS FOR FURTHER STUDY

There is a need to carry this research to greater depth. Several relationships have been established in this study, but no attempt has been made to account for their existence. The sample represents the greater portion of the student population of Edmonton city, but schools have not been compared. It is possible that different schools would tend to represent different socio-economic levels, different ethnic backgrounds and different attitudinal and behavioural patterns. The results obtained from this study should also be compared with other cities.

A study of this type should be done in rural areas and further comparative studies made. A longitudinal study, if undertaken, could discover how students' political attitudes develop and change during their high school years. The age at which certain attitudes are formed and the age at

which they tend to decrease could be verified.

III. IMPLICATIONS

Administrators could reconsider the objectives for their school program. A statement of objectives taken from the Alberta high schools' Program of Studies is:

The general objectives of social education is to develop citizens who (1) understand our changing society; (2) possess a sound frame-work of values and ideals which indicate what ought to be, set goals for the individual and give direction to his actions; and (3) have the necessary competence — skills and abilities — to participate in group living in such ways as to make changes in the direction of the desired values and ideals.

Certainly, if these objectives are to be met in our high schools, it means developing better political attitudes in the students. Obviously, this cannot be done by changing the parents' attitudes, their father's income or their socio-economic status. But, it appears logical that more could be done to encourage students to participate within their own political system, that is, the political system which exists within the student body.

Particular attention should be given to the non-participant. Positive steps can be taken to integrate this student within the system. It is sometimes said that we are building middle class schools for middle class students. If this is so, it should be realized that lower class students are at a disadvantage in that their school life presents them

with an entirely different world. Only the daring and the bold venture into it with apparent confidence.

School programs should be developed which will be suited to the student. With an increasing number of students entering high school, this necessitates offering a wider choice. Too often, administrators have tried to make the student fit the program and have then complained about the problems which the students were presenting. Programs, which offer opportunities to all students and which encourage them to participate, especially in student government affairs, help develop politically efficacious citizens who have a high sense of citizen duty.

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APPENDIX A
QUESTIONNAIRE

HIGH SCHOOL STUDENT VALUES INVENTORY

Revised Edition
The University of Alberta

READ CAREFULLY

1. Do not start answering before you are told to do so.
2. Answer EVERY question to the best of your ability. Please do not make any marks on this questionnaire.
3. Answer each question by placing the correct mark (using an HB pencil) in the proper space on the answer sheet.
4. If in doubt about procedure, ask the teacher for assistance.
5. Please answer sincerely and accurately. We want **your** opinion.
6. Do not write your name on any paper.
7. Mark only one item for each question.
8. Now turn to number 1, WORK QUICKLY, and answer every question as well as you can.

Begin

1. State your sex.
A. boy
B. girl
2. In which school grade are you?
A. nine
B. ten
C. eleven
D. twelve
E. thirteen
3. How old are you?
A. 14 or younger
B. 15
C. 16
D. 17
E. 18 or over
4. What is the highest level of your father's education?
A. elementary
B. junior high
C. high school
D. some university
E. university degree
5. What is the highest level of your mother's education?
A. elementary
B. junior high
C. high school
D. some university
E. university degree
6. Your last year's average on the final examination was about
A. 0-39
B. 40-49
C. 50-64
D. 65-79
E. 80-100
7. In how many extra-curricular activities do you participate in school at the present time?
A. none
B. one
C. two
D. three
E. four or more
8. In how many organized activities do you participate outside of school? (e.g. music lessons, swimming instruction, hockey, etc.)
A. none
B. one
C. two
D. three
E. four or more
9. Have you been elected to any school position this year or last year?
A. yes
B. no
10. Make an estimate of your family's annual income level.
A. below \$2,000
B. \$2,000-\$3,999
C. \$4,000-\$6,999
D. \$7,000-\$9,999
E. \$10,000 or over
11. What type of an elected position do you hold in school?
A. no position
B. president or vice-president
C. secretary or treasurer
D. sports or other committee representative
E. Any other position e.g. editor, room rep.
12. How many brothers and sisters do you have?
A. none
B. one
C. two
D. three
E. four or more

13. Which item below fits your parents most accurately?
 - A. they understand problems of teen-agers and assist them
 - B. they are not interested in teen-agers
 - C. they seem willing to help but don't understand problems of teen-agers
14. Are you planning to go to a technical institute?
 - A. yes
 - B. undecided
 - C. no
15. Do you have a car of your own?
 - A. yes
 - B. no
16. Did you go out for football last fall either as a player or spectator?
 - A. yes
 - B. no
17. Do you date?
 - A. no
 - B. yes, about once a month
 - C. yes, about once a week
 - D. yes, about twice a week
 - E. yes, more than twice a week
18. Have you joined a church or do you intend to join a church?
 - A. yes
 - B. no
19. Do you go steady?
 - A. yes
 - B. no
20. Which one of these items is most important in making a boy popular with the girls in your school?
 - A. having a nice car
 - B. high grade, honor roll
 - C. being an athletic star
 - D. being in the leading crowd
21. Do you earn any money by working outside the home? (not counting summer work)
 - A. yes
 - B. no
22. Do you smoke?
 - A. yes, regularly
 - B. yes, occasionally
 - C. no
23. Would you say that you are a part of the leading crowd in your school?
 - A. yes
 - B. no
24. What is the highest level of education you expect to have actually attained ten years from now?
 - A. Not finished high school
 - B. High School graduate or Technical Institute graduate
 - C. Some University, e.g., Teaching Certificate, Reg. Nurse, etc.
 - D. University degree, e.g., B.A., B.Ed., B.Sc., R.N.
 - E. Professional Degree, e.g., Doctor, Lawyer, Ph.D.
25. Which one of these things would be hardest for you to take?
 - A. parents' disapproval
 - B. teachers' disapproval
 - C. breaking with friend
26. If your friends asked you to join in a secret escapade for a week-end, would you join them if your parents were not in favor?
 - A. yes
 - B. no
27. How many subjects have you failed since starting grade nine?
 - A. none
 - B. one
 - C. two
 - D. three
 - E. four or more
28. Who influenced you most in your life?
 - A. parents
 - B. teachers
 - C. clergy, minister, pastor, rabbi
 - D. friends
29. Which one of the following are you really worried about most?
 - A. health
 - B. academic success
 - C. acceptance by friends
 - D. others
30. Roughly, what proportion of home basketball games did you attend this year?
 - A. none
 - B. less than half
 - C. more than half
31. Have you chosen your profession?
 - A. yes
 - B. no
32. Why do you go to church?
 - A. for social reasons
 - B. for religious or spiritual reasons
 - C. don't attend
33. Would you hand in an essay or assignment that your friend had done as your own?
 - A. yes
 - B. no
34. If you could be remembered here at school for one of the things below, which one would you want it to be?
 - A. outstanding student
 - B. athletic star
 - C. most popular
35. Do your parents attend church?
 - A. yes, regularly
 - B. yes, occasionally
 - C. no
36. Do you drink beer?
 - A. yes, frequently
 - B. yes, occasionally
 - C. no

37. What yearly income do you expect to actually make ten years from now?
 - A. below \$3,000
 - B. \$3,000 to \$5,999
 - C. \$6,000 to \$8,999
 - D. \$9,000 to \$12,000
 - E. more than \$12,000
38. Among the things you strive for during your high school days, which of the following is most important to you?
 - A. pleasing your parents
 - B. learning as much as possible in school
 - C. living up to your religious ideals
 - D. being accepted and liked by other students
 - E. pleasing the teacher
39. Which one of the following would be most important to you in a job?
 - A. the security of a steady job
 - B. the opportunity for rapid promotion
 - C. the enjoyment of the work itself
 - D. a high income
40. How many evenings a week do you spend with the gang?
 - A. none
 - B. one
 - C. two or more
41. Does your mother have a job outside the home?
 - A. yes
 - B. no
42. In your adult life whom would you want to resemble most?
 - A. one of your parents
 - B. your favorite teacher
 - C. no one but yourself
 - D. a relative
 - E. a friend
43. If you had your choice would you leave school before graduation?
 - A. yes
 - B. no
44. Is athletics very important for you in school?
 - A. yes
 - B. no
45. How much time, on the average, do you spend doing homework outside school on a weekday?
 - A. none or almost none
 - B. less than one hour
 - C. one to two hours
 - D. between two and three hours
 - E. three or more hours
46. Have you attended Sunday School or Church School?
 - A. yes, regularly
 - B. yes, occasionally
 - C. no
47. Check any of the following drinks that are served in your home. Check only one.
 - A. beer
 - B. table wine or other alcoholic beverages
 - C. all of the above
 - D. none of the above
48. Which one of the following do you think is the most important characteristic necessary for success in life?
 - A. money
 - B. athletics
 - C. personality
 - D. academic achievement
 - E. friendliness
49. What kind of music do you enjoy most?
 - A. modern—like "beatle"
 - B. classical
 - C. country and western
50. Which item below fits most of the teachers at your school?
 - A. they understand problems of teen-agers and assist them
 - B. they are not interested in teen-agers
 - C. they seem willing to help but don't understand problems of teen-agers
51. How often do you go to the movies?
 - A. never, or almost never
 - B. about once a month
 - C. about once a week
 - D. twice a week or more
52. Suppose your family had planned an extensive trip for a vacation in the summer. If you go along with them, it means that you cannot go camping with your friends, as you had planned. What would you do?
 - A. go with your parents
 - B. go camping with friends
53. About how much time, on the average, do you spend watching TV on a weekday?
 - A. none or almost none
 - B. less than one hour a day
 - C. one to two hours
 - D. between two and three hours
 - E. three or more hours a day
54. What is the major characteristic necessary to be a member of the leading crowd at your school?
 - A. good looks
 - B. friendliness
 - C. academic excellence
 - D. money
 - E. athletic ability
55. Which one of the following is your favorite type of TV program?
 - A. western
 - B. quiz shows or contests
 - C. interviews or news
 - D. sports
 - E. comedy
56. Do you say prayers before you go to bed at night?
 - A. yes, usually
 - B. yes, sometimes
 - C. no
57. Would you say that you have a relatively happy life at home?
 - A. yes
 - B. no

58. If you could have only one of the following, which one would you choose?
 A. wealth
 B. education
 C. fame
 D. faith
59. Would you say that your school experiences are fairly satisfactory?
 A. yes
 B. no
60. What would you most like to get out of high school?
 A. broad education
 B. training for a vocation
 C. preparation for citizenship
 D. knowing how to get along with people
 E. friends
61. Which one of the following do you regard as most important for your future?
 A. academic achievement
 B. popularity
 C. sports, cheerleading
62. Are you planning to go to junior college, teachers college, nurses training, or university after high school?
 A. yes
 B. undecided
 C. no
63. What does the phrase "outstanding student" mean to you?
 A. in the leading crowd
 B. a very good athlete
 C. academically superior
 D. popular
 E. elected to some school position
64. If you found a five dollar bill in your school without anyone seeing it, what would you do?
 A. report the find
 B. keep the money
65. Which of the following subjects do you like best in school?
 A. mathematics, sciences
 B. English
 C. social studies
 D. physical education
 E. vocational courses
66. Which one of the following is most satisfying for your school life?
 A. popularity
 B. athletics
 C. academic achievement
67. Does your father or mother participate in any type of sport?
 A. yes
 B. no
68. Are your parents concerned with your doing well in academic work in school?
 A. yes, very much
 B. yes, to some extent
 C. not much
69. Do you believe your interest in athletics is
 A. very important for life
 B. somewhat important for life
 C. a passing phase?
70. Do your parents watch television
 A. more than you
 B. as much as you
 C. less than you?
71. The major problems in your school relate to
 A. lack of a chance to participate in sports
 B. lack of school spirit
 C. lack of necessary facilities
 D. cliques
 E. none of these
72. What course are you taking now?
 A. university entrance
 B. general
 C. commercial
 D. vocational
73. Does your family own a car? A. Yes B. No
74. Does your family have a garage or carport? A. Yes B. No
75. Did your father go to high school? A. Yes B. No
77. Did your father go to university? A. Yes B. No
78. Did your mother go to university? A. Yes B. No
79. Is there a writing desk in your home? A. Yes B. No
80. Does your family have a hi-fi record player? A. Yes B. No
81. Does your family own a piano? A. Yes B. No
82. Does your family get a daily newspaper? A. Yes B. No
83. Do you have your own room at home? A. Yes B. No
84. Does your family own its own home? A. Yes B. No
85. Is there an encyclopedia in your home? A. Yes B. No
86. Does your family have more than 100 hard covered books? (e.g. 4 shelves 3 feet long) A. Yes B. No
87. Did your parents borrow any books from the library last year? A. Yes B. No
88. Does your family leave town each year for a holiday? A. Yes B. No
89. Do you belong to any club where you have to pay fees? A. Yes B. No
90. Does your mother belong to any clubs or organizations such as study, church, art, or social clubs? A. Yes B. No
91. Does your family own a color TV set? A. Yes B. No
92. Have you ever had lessons in music, dancing, art, swimming, etc., outside of school? A. Yes B. No

DIRECTIONS

The following questions consider the relative value of certain characteristics as they relate to the occupations represented by the following:

Social Worker, Teacher, Doctor, Nurse, Lawyer.

Carefully answer each question below GIVING YOUR OWN OPINION. Your answer should be selected from one of the five occupations given.

If your answer is SOCIAL WORKERmark A

If your answer is TEACHERmark B

If your answer is DOCTORmark C

If your answer is NURSEmark D

If your answer is LAWYERmark E

93. Which of these occupations CONTRIBUTES THE MOST to the community?

94. Which CONTRIBUTES THE LEAST?

95. Which of these occupations has the MOST PRESTIGE?

96. Which has the LEAST PRESTIGE?

97. Which of these occupations has THE GREATEST SHORTAGE OF QUALIFIED PERSONNEL?

98. Which has the LEAST SHORTAGE OF QUALIFIED PERSONNEL?

99. Which of these occupations REQUIRES THE MOST TRAINING?

100. Which REQUIRES THE LEAST TRAINING?

REMINDER: WE WANT YOUR OPINION. CHOOSE YOUR ANSWER CAREFULLY FROM THE FIVE OCCUPATIONS LISTED ABOVE.

101. Which of these occupations SHOULD require the most training?

102. Which SHOULD require the least training?

103. Which of these occupations has the highest percentage of COMPETENT PERSONNEL?

104. Which has the lowest percentage of COMPETENT PERSONNEL?

105. Which of these occupations gives the MOST SERVICE PER DOLLAR?

106. Which gives the LEAST SERVICE PER DOLLAR?

107. Which of these occupations is MOST ACTIVE in church work, service clubs, youth work, etc.?

108. Which is LEAST ACTIVE in church work, service clubs, youth work, etc.?

109. Which of these occupations is MOST ACTIVELY involved in POLITICAL ACTIVITIES?

110. Which is LEAST ACTIVELY involved in POLITICAL ACTIVITIES?

111. Which of these occupations contributes MOST to the total good of everyone?

112. Which contributes LEAST to the total good of everyone?

113. Which of these occupations has the HIGHEST AVERAGE INCOME?

114. Which has the LOWEST AVERAGE INCOME?

115. Which of these occupations SHOULD HAVE THE HIGHEST AVERAGE INCOME?

116. Which SHOULD HAVE THE LOWEST AVERAGE INCOME?

117. Which of these would you choose FIRST to associate with socially?

118. Which would you choose LAST to associate with socially?

119. Which of these occupations would you consider MOST PROFESSIONAL?
120. Which would you consider LEAST PROFESSIONAL?
121. If nothing stood in the way, and you had to choose from these five occupations for yourself, which one would you choose first?
122. Under similar conditions which one would you choose last?

We wish to check whether you are marking your responses beside the right numbers on your answer sheet.
To assist us please mark as follows:

123. Mark A
124. Mark B
125. Mark C
126. Mark D
127. Mark E
128. How many good friends of your own sex have you in school?
- A. none
 - B. one
 - C. two
 - D. three
 - E. four or more
129. How many good friends of the opposite sex have you in school?
- A. none
 - B. one
 - C. two
 - D. three
 - E. four or more
130. Do you own a motorcycle or scooter?
- A. yes
 - B. no

Directions: A number of controversial statements are given below. Indicate the degree of your personal agreement or disagreement with each statement by placing a mark beside the appropriate number on the answer sheet.

Mark A if you **agree strongly**.

Mark B if you **agree somewhat**.

Mark C if you are **undecided**.

Mark D if you **disagree somewhat**.

Mark E if you **disagree strongly**.

131. Schools should be granted greater local autonomy in curriculum building.
132. Provincial teachers' associations should be able to discipline members for violating teacher ethics.
133. Curriculum guides issued by the Department of Education should specify methods to be used.
134. The curriculum authority of the Department of Education should be limited to matters of course objectives and minimum content.
135. Provincial teachers' associations should be concerned with the competence of teachers.
136. Effective teaching can be done with more than twenty-five pupils per class.
137. Teachers' associations should do everything in their power to maintain the right to strike.
138. Selection of instructional methods should be a prerogative of teachers.
139. Provincial teachers' associations should have the right to recommend cancellation of a teacher's certificate.
140. All teachers should be employed and paid by the provincial government.

PART 2

Directions:

Indicate your opinion, your immediate "feeling" about each statement below by placing a mark in the proper place on the answer sheet. Use the following code:

- | | |
|------------------|---------------------|
| A—Agree strongly | D—Disagree slightly |
| B—Agree somewhat | E—Disagree somewhat |
| C—Agree slightly | F—Disagree strongly |

1. Voting is the only way that students like me can have any say about how the students' council runs things.
2. Sometimes students' council activities and business seem so complicated that a student like me can't really understand what's going on.
3. Students like me don't have any say about what the students' council does.
4. I don't think student council members care much what the students like me think.
5. So many other students vote in the students' council elections that it doesn't matter much to me whether I vote or not.
6. It isn't so important to vote when you know your candidate doesn't have any chance to win in the students' council election.
7. A good many students' council elections aren't important enough to bother with.
8. If a person doesn't care how an election comes out he shouldn't vote in it.

APPENDIX B
FACTOR LOADINGS

UNROTATED FACTOR LOADINGS

Item	Communalities	Sense of Citizen Duty 1	Political Efficacy 2
1	0.545	- 0.377	0.635
2	0.372	- 0.486	0.369
3	0.541	- 0.619	0.398
4	0.505	- 0.689	0.196
5	0.647	- 0.741	- 0.312
6	0.603	- 0.710	- 0.316
7	0.626	- 0.681	- 0.403
8	0.119	- 0.197	- 0.284
Eigen Values	3.958	2.790	1.168

TRANSFORMATION MATRIX

- 0.747	- 0.665
- 0.665	0.747

VARIMAX FACTOR LOADINGS

Item	Communalities	Sense of Citizen Duty	Political Efficacy
		1	2
1	0.545	- 0.141	0.724
2	0.372	0.118	0.598
3	0.541	0.197	0.709
4	0.505	0.397	0.589
5	0.647	0.761	0.260
6	0.603	0.740	0.236
7	0.626	0.776	0.152
8	0.119	0.336	- 0.080
Eigen Values	3.958	2.073	1.885

TRANSFORMATION MATRIX

- 0.747	- 0.665
- 0.665	0.747

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